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ABSTRACT

This document was developed to assist local school systems in North Carolina in planning effective and comprehensive workforce development education programs. It contains information about planning, required resources, instructional guidelines, and program area offerings. The guide is organized in three parts. Part I provides a program description for workforce development education programs. Subparts include information related to planning, resources, and guidelines for organizing and managing work-based learning. Part II highlights specific planning information for each workforce program area: middle grades workforce development education, agricultural education, business education, career development, family and consumer sciences education, health occupations education, marketing education, technology education, and trade and industrial education. The information, 6 to 10 pages in length, contain: a program description; design; major program areas; program uniqueness; course offerings from grades 7-12; individual course descriptions (including recommended enrollment and size and hours of instruction); local course options, and an address for more information. Included with the section on career development is a description of industry-education coordination. Part III describes services for special populations. The section includes the following: program description, objectives, description of eligible target groups, definitions of disabling conditions, service delivery strategies, and enrollment guidelines. Three appendixes contain the following: information on vocational student organizations; the needed form for modification requests for work force development education courses; and the North Carolina Minimum State Graduation and Postsecondary Education Requirements. (KC)

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Programs of Study and Support Services

GUIDE

ED 417 313

Agricultural Education

Business Education

Career Development

Family and Consumer Sciences Education

Health Occupations Education

Marketing Education

Middle Grades Education

Technology Education

Trade and Industrial Education

Special Populations Services

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FOREWORD

This document has been prepared to assist local school systems in planning effective and comprehensive workforce development education programs. It contains information about planning, required resources, instructional guidelines, and program area offerings.

This document reflects the need for local school systems to have flexibility to accommodate varying local patterns of organization, resources, and needs. It has been prepared with input from over 340 parents or business/industry representatives, 150 local school administrators, and 2,000 teachers. We appreciate their invaluable input and suggestions.

We believe that this document will have a positive influence on thousands of North Carolina students who take vocational and technical courses. As a result, the economic development of our State will also be enhanced.

June S. Atkinson

June S. Atkinson
Head, Workforce Development
and Assistant Director, K-12
Division of Instructional Services

The Programs of Study and Support Services Guide was approved by the State Board of Education on October 2, 1997.

PREFACE

The *Programs of Study* is to be used to plan workforce development education programs beginning with the 1998-99 school year.

Part I provides a program description for workforce development education programs. Subparts include information related to planning, resources, and guidelines for organizing and managing instruction.

Part II highlights specific planning information for each workforce program area. The content is outlined by program descriptions, major program objectives, scope and sequence, and course descriptions. Included with the Career Development Section is a description of industry-education coordination.

Part III describes special population services. This section has a program description, objectives, description of eligible target groups, definitions of disabling conditions, service delivery strategies, and enrollment guidelines.

Some local situations may require other modifications. When these occur, a modification procedure has been developed and is included in the appendices. Vocational student organizations are also described in the appendices.

WORKFORCE DEVELOPMENT EDUCATION
PROGRAMS OF STUDY
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Activities and procedures within Workforce Development Education are governed by the philosophy of simple fairness to all. Therefore, the policy of the Division is that all operations will be performed without regard to race, sex, color, national origin, or handicap.

Part I
Workforce Development Education In North Carolina

PLANNING FOR WORKFORCE DEVELOPMENT EDUCATION

Mission and Purpose

The mission of workforce development education is to help empower students for effective participation in an international economy as world-class workers and citizens.

Workforce development education fulfills this mission by:

1. Preparing students for further vocational and technical education and lifelong learning.
2. Preparing students for initial and continued employment.
3. Assisting students in making educational and career decisions.
4. Applying and reinforcing related learning from other disciplines.
5. Assisting students in developing decision-making, communication, problem-solving, leadership, and citizenship skills.
6. Preparing students to make informed consumer decisions and apply practical life skills.
7. Making appropriate provisions for students with special needs to succeed in workforce development education programs.

Program Areas

Competency-based courses are offered in eight program areas, with each area having school-based and work-based learning opportunities.

1. Agricultural Education
2. Business Education
3. Career Development
4. Family and Consumer Sciences Education
5. Health Occupations Education
6. Marketing Education
7. Technology Education
8. Trade and Industrial Education

Combined with other academic offerings, workforce development education assists all enrollees in career goals. Students are to have a career development plan outlining academic and workforce development courses to be taken to meet a tentative career objective.

Goals

Goals Common to All Workforce Development Areas*

Programs in workforce development are designed to contribute to the broad educational achievement of students. These workforce programs contribute to students being able to

1. Identify, organize, plan, and allocate resources – time, money, materials and facilities, and human resources.
2. Work with others by participating as a team member, serving clients/customers, negotiating, and working with diversity.

3. Acquire and use information.
4. Work with and operate effectively within social organizations and technological systems.
5. Work with a variety of technologies.
6. Contribute to the development of reading, writing, listening, speaking, and mathematical skills.
7. Contribute to the development of thinking creatively, making decisions, solving problems, and reasoning.

* These goals are based on the Secretary's Commission on Achieving Necessary Skills (SCANS) Report.

State Board of Education Responsibilities

The State Board of Education is responsible for providing direction and leadership to workforce development education. The State Board of Education's guidelines are outlined in the *ABCs of Public Education, Basic Education Program,* and the *Master Plan for Workforce Development Education.*

ABCs

The ABCs has three major emphases:

1. Accountability: Schools are held accountable for student progress. The teachers and principal at each school are responsible for how well they teach children.
2. Basics: Schools are to focus on the care of a good, solid education: reading, writing, and mathematics.
3. Control: Individual schools are given maximum flexibility to decide where to channel their efforts and their resources to achieve success.

The *Basic Education Program* for North Carolina's Public Schools outlines the curriculum which should be provided in all schools throughout the state. Workforce development education is one of the curriculum areas included.

Master Plan

The *Master Plan for Workforce Development Education* establishes the philosophy and framework of the State Board of Education for workforce development education. The framework of the State Board of Education includes the following:

1. Courses should be available to students without regard to race, sex, national origin, or handicap.
2. Teaching transferable and thinking skills is important in preparing students to adapt to a changing work environment.
3. Instruction should provide opportunities for students to apply communication, computational, scientific, and other academic skills to specific areas.
4. Input from local advisory committees, employment data, community surveys, student surveys, and student follow-up are necessary in planning, implementing, and evaluating local programs.

5. Students are furnished written documentation detailing specific competencies achieved through participation in a workforce development education program.
6. Counselors and teachers should coordinate programs with business and industry to ensure that educational objectives match work requirements. Additionally, work experiences achieved through shadowing, internships, cooperative on-the-job training, or apprenticeships ensure an easy transition from a student to a competent, wage earner.
7. All students in workforce development programs have an opportunity to develop and extend their learnings through participation in active vocational student organizations. The program of work for each organization should be based on instructional competencies and be an integral part of the program.
8. Strong career development, guidance, counseling, job placement, and follow-up services are to be available to assist students in planning for their careers and enrolling in appropriate courses. All students should have tenative career development plans.
9. Parents are to be actively involved in helping their children choose courses.
10. Full cooperation, communication, and coordination between secondary schools and community colleges are necessary for each student advancing to a higher education level.

Vocational Student Organizations

A vocational student organization (VSO) is an integral part of each program area's curriculum. The VSOs are:

Career Exploration Clubs of North Carolina (CECNC) for
Middle Grades Students
DECA for Marketing Education
Future Business Leaders of America (FBLA)
  for Business Education
FFA for Agricultural Education
Future Homemakers of America/Home
  Economics Related Occupations (FHA/HERO)
  for Family and Consumer Sciences Education
Health Occupations Student Association (HOSA)
  for Health Occupations Education
Technology Student Association (TSA)
  for Technology Education
Vocational Industrial Clubs of America (VICA)
  for Trade and Industrial Education

Any student enrolled in a workforce development course is eligible for membership in the vocational student organization associated with that program.

VSOs develop citizenship, technical, leadership, and teamwork skills essential for students who are preparing for the workforce and further education. They enhance students' civic awareness and provide opportunities for developing social competencies and a wholesome attitude about living and working.

VSOs provide a unique instructional method for attaining the competency goals and objectives identified in each course. Their activities are considered a part of the instructional day when they are directly related to the competencies and objectives in course blueprints.

Determining Program Offerings

Workforce development education planners determine local program offerings by considering the following:

1. Availability of resources.
2. Changes in population characteristics.
3. Labor needs in new and emerging occupations, including small business ownership.
4. Labor needs in existing occupations with greater than average anticipated growth.
5. Rates of increase in employment projected for the service sector of the public and private economy.
6. Projected increase in occupations requiring technical skills.
7. Impact of technology on consumer decision making.
8. Impact of managing personal, family, and work lives.
9. Community college offerings.

When determining local program offerings for a school or a total school system, local planning personnel should organize a comprehensive and appropriate sequence of workforce offerings for students enrolled in grades 6-12. These offerings should be based on an assessment of student needs, interests, and aspirations, labor market demands, and projections.

Evaluating Program Accomplishments

Consistently high quality local programs can be ensured through a system of continuing qualitative and quantitative evaluation and reporting of programs, services, and activities. The State Board of Education has the primary responsibility for statewide evaluation of workforce development education programs.

Local program evaluation is based on State Board of Education's adopted performance measures and standards. These performance measures are based on access to, progress through, and success in workforce development education. All enrollees, including members of special populations, are assessed by these measures and standards at the local level. Annually, local school systems must determine if these standards are met, or if substantial progress is being made to meet the standards. Local evaluations are disaggregated by courses, programs, sites, and special population categories.

Student Achievement and Progress

Student achievement and progress may be evaluated by using criterion-referenced measures such as:

- Written and oral pre- and post-assessments.
- Performance tests with teacher or employer rating checklists.
- Performance gains.
- Observation of performance in class and on-the-job settings by teachers and job supervisors.
- Evaluation of projects and products completed by the student, using checklists and rating scales.
- Follow-up studies with students and employers.

Testing instruments and procedures may be designed locally or obtained from another source. Sources include the computerized competency/test-item banks available from the Workforce Development Education, North Carolina Department of Public Instruction. This resource is a part of the Vocational Education Competency Achievement Tracking System (VoCATS).

Reports of enrollment, student and employer follow-up, and work-based learning hours and wages constitute data bases for local program planners and state staff. Others sources include labor market, demographic, teacher, student, and program data. These data sets should be used in making programmatic decisions, for program review and improvement, for guidance, and as a basis for marketing workforce development education to internal and external audiences.

COORDINATION WITH COMMUNITY/TECHNICAL COLLEGES

Coordination

Coordinating secondary and community/technical college programs is important in helping students make a smooth transition from one level of instruction to another without their experiencing delays or loss of credit. Articulation models include time-shortened, advanced skills, and technical preparation associate degree programs.

Time-shortened Programs

Time-shortened programs eliminate unnecessary redundancy in educational experiences. They grant advanced placement to high school students entering a postsecondary program. As a result, students complete an occupational specialty or associate degree more quickly than a normal postsecondary program would allow.

Advanced Skills Programs

Advanced skills programs streamline educational experiences for grades 11-14 in order to incorporate more advanced training than a traditional program would provide. It allows students who have mastered academic or vocational skills in high school to bypass some introductory postsecondary courses, thus allowing more time for advanced skills courses.

College Tech Prep

A college tech prep program is a sequential course of study designed to meet the need for graduates to have more technically-oriented educational preparation. Through a blending of higher level academic and workforce development courses, college tech prep prepares students for increasingly sophisticated technical occupations. It combines English, mathematics, science, workforce development course sequences, and other graduation requirements. *See Appendix C for the State Board of Education's college tech prep requirements.*

College Tech prep combines secondary and post-secondary programs that:

- Provide technical preparation in at least one field of engineering technology, applied science, mechanical, industrial, or practical art or trade, or agriculture, health, or business.
- Build student competence in mathematics, science, and communications (including applied academics) through a sequential course of study.
- Lead to placement in employment.

Any model should have:

- Leadership and commitment from top administrators.
- Early faculty involvement.
- Written articulation agreements.
- Open and frequent communications.
- Clearly defined responsibilities and goals.
- Clearly identifiable courses of study.
- Competency-based curriculum.
- Common focus on mutual goals.
- Integration of academic and workforce development education.
- Curriculum alignment.
- Career and development counseling.
- Assessment and evaluation.
- Parental involvement.
- Work-based learning.

RESOURCES

Personnel

Local boards of education are responsible for securing the persons best qualified for their workforce development education programs. Selection must be subject to licensure standards approved by the State Board of Education.

Additional information related to licensure may be obtained by referring to the licensure guidelines available from the Division of

Staffing Responsibilities

Workforce development teachers should have the personal qualities, professional preparation, appropriate license, and work experience to carry out their teaching responsibilities effectively. The number and variety of course offerings determine the number of workforce development teachers needed in a school. Single teacher staffing can and will limit the number of courses offered. A sequence which extends from introductory study to specialized occupational areas usually requires multiple staffing.

The major duties of workforce development education teachers include:

- Preparing and implementing instructional plans.
- Working with business/industry representatives.
- Evaluating student progress.
- Implementing vocational student organization (VSO) leadership and instructional activities in and out of the classroom.
- Organizing and maintaining tools, equipment, and the facility.

An increasing number of teachers also have responsibility for using work-based learning activities such as the cooperative on-the-job training and supervision of school-based enterprises.

Sponsoring VSOs requires planning meetings, both at the local and regional levels, which may occur in the evening or on weekends. One lead advisor should be appointed to coordinate VSO activities and responsibilities for each program area.

Each of these major categories requires adequate time for preparation, often prior to school and after regular instructional time. Additional time should be provided if the teacher maintains laboratory equipment or coordinates work-based learning. Teachers should have adequate time for instructional preparation.

Professional Development

A school system should have a professional development program which assures that:

1. Activities are provided in accordance with identified professional, skill area, and individual growth and development needs of personnel.
2. An assessment has been conducted to identify staff development needs of workforce development education personnel.
3. The selection of in-service topics and activities is based on identified needs within the instructional program.
4. Teachers and other concerned personnel are informed regarding staff development opportunities available within and outside the local administrative unit, including colleges, universities, businesses and postsecondary institutions.
5. Teachers and other personnel are made aware of the components in the school system's staff development plan.
6. In-service activities offer practical methods to improve instruction and expedite job responsibilities.

7. Within reason, in-service activities are readily available and conveniently scheduled for participants.
8. Teacher and supportive staff are provided opportunities to participate in at least one annual staff development activity related to their teaching assignments and/or areas of licensure.

Facilities

Success of workforce development programs is dependent on adequate and well-equipped facilities which stay current with the business, industry, and other employment categories they represent. To assure successful learning, the physical facilities for each program should meet the following requirements:

1. Size and space for each program is adequate to accommodate the number of students enrolled.
2. Space is arranged for maximum flexibility and ease in teacher supervision of multiple activities.
3. Permanent furnishings and equipment are adequate in number and in good operating condition.
4. There is adequate provision for maintaining service systems in good working condition (e.g., electricity, water, light control).
5. Classrooms, laboratories, auxiliary areas (finish rooms, storage), and other facilities are adequate in design, suitability, and quantity to enable students to meet the specified objectives.
6. Each teacher is assigned a conveniently located, furnished, and equipped area for planning, record keeping, consultation, and administration.
7. All facilities meet the requirements of the Environmental Protection Agency and Occupational Safety and Health Act.
8. Restrooms and dressing rooms are located to provide convenient access to students of either sex.
9. Facilities have been modified to accommodate handicapped students.
10. Adequate provisions exist for the safety and health of students and teachers.

For further information about facilities, refer to the Workforce Development Education Facilities Planner.

Equipment, Materials, and Supplies

Students differ widely in interests, abilities, background, learning styles, and prerequisite knowledge and skills. The variations which exist in students make it equally important that a wide range of current and bias-free instructional materials be made available to students.

If students are to get the most out of occupational and practical life skills, they must have the opportunity to practice the tasks involved. This means that a quantity of consumable supplies must be available to students for practice and demonstration activities.

Rapid changes in technology require a regular updating of tools, equipment, and even raw materials. The school system must respond to modern technological advances by maintaining an on-going program for updating all tools, equipment, and materials used by students in laboratory activities. In general, the school system should plan to have the following available for each program:

1. Basic equipment and instructional aids in adequate quantity, quality, and currency to permit appropriate practice in laboratory instruction.
2. A budget that permits adding, replacing, and updating equipment and materials.
3. A budget that permits consumable supplies (such as food, lumber, ingredients for mortar, etc.) to be made available in sufficient quantities and at appropriate times.
4. Currently-adopted textbooks (or their equivalent) and pertinent supplementary books readily available in adequate supply and in usable condition.
5. A variety of bias-free instructional materials that can accommodate a great diversity of student interests.

Also, the school system should make sure that all tools and equipment are kept repaired and in good working order. Adequate instructional support and resource materials should be available at each teaching station or easily obtained from the media center or other central location.

For further information about specific equipment, refer to the Equipment Standards for Workforce Development Education.

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Funding

Workforce development education programs are funded through a combination of state, federal, and local resources. The State Board of Education is committed to a funding formula which provides state funds for the support of a statewide secondary program. Federal vocational education funds allocated to local boards of education are to be spent according to federal criteria and purposes.

Local boards of education receive state/federal funds on the basis of a continuing plan and an annual application for workforce development education. This plan is to be developed with the advice of local advisory committees and is to be consistent with criteria set up by legislation and State Board of Education policy.

The vocational monies may be used to:

1. Employ instructional and supportive personnel.
2. Purchase instructional materials, supplies, and equipment.
3. Conduct certain other activities which contribute to the state and local goals/objectives of the workforce development program and which are consistent with criteria for their use.

The state/federal vocational funds made available are to be used to supplement the amount of local funds that would, in the absence of vocational funds, be made available for vocational education and in no case supplant funds.

All workforce development education courses identified in the course descriptions sections of this document are eligible for vocational funding when offered in an approved scope and sequence and according to the guidelines in the *Workforce Development Education Fiscal and Policy Guide.*

Curriculum Planning

It is critical to the success of a program's implementation/expansion that planning precede student enrollment. This planning time is to be used by administrative personnel to:

1. Conduct student interest, community, and employment surveys to determine if there is a need for the program.
2. Select an advisory committee composed of business, industry, and lay community representatives who jointly collaborate with educators in the decision-making process.
3. Select a licensed teacher who can begin contributing to the organizational operation of the program.
4. Design and organize classroom/laboratory facilities and obtain equipment, supplies, books, and materials.
5. Assure that local administrators and other school personnel understand and support the total program.
6. Interpret the program to students and the school community.

In addition, teachers may need time to develop on-the-job skills and the knowledge required for teaching the course.

Enrollment

Enrollment in each class is to be of a size that ensures effective instruction as prescribed in the individual course descriptions in Part II of the *Programs of Study.*

Recommended maximum student enrollment is established to maintain proper instructional management and to assure a safe and healthful teaching/learning environment. Maximum figures are suggested for each course of instruction based on the:

1. Degree to which student safety is involved in the learning process.
2. Desired level of learning outcomes for students in the course.
3. Type of instructional activities involved.
4. Type, quantity, and size of instructional equipment, materials, and supplies.
5. Amount of space needed by students and teachers for instructional purposes.

Factors influencing the number of students for any particular course should take into consideration availability of shops and laboratories, availability of qualified instructors, adequacy of preparation time, cooperative on-the-job placement, internship arrangements, number of classroom work stations, and class scheduling requirements.

Course blueprints, with competencies and objectives, and test-item banks serve as guides for planning and evaluating instruction. Available through VoCATS, these materials help teachers identify and assess student achievement.

Instructional Organization and Content

Course offerings within each program area are both competency-based and individualized. Teachers within a program should cooperatively develop a single, comprehensive instructional plan for each course and program in the school and in the school system. Teachers are also responsible for evaluating competencies established for the program. Where appropriate, discussions about gender equity should be incorporated into the curriculum.

WORK-BASED LEARNING

Work-based learning strategies allow schools to go beyond the classroom and into the community to develop student competence. An essential component of any work-based learning is connecting the workplace to school-based learning.

Apprenticeship

Apprenticeship is one of the oldest methods of job training. High school apprenticeship is an industry-driven education and career training program based on recognized industry standards. It is a means by which employers address current and projected employment needs. This

Continued on next page

program is a partnership among business, industry, education, government, parents and youth apprentices. Some apprenticeship characteristics are:

- Use of a skilled journeyman to help instruct the apprentice.
- Combination of classroom-related instruction with structured work-based learning.
- Employment by an employer who has a direct need for trainees in the occupation.
- Incremental pay scale that increases with skill and knowledge development.
- Training of a highly skilled technician or craft person.
- Appropriate for occupations that do not require a college degree but require a high level of skill and knowledge.
- Registration by the North Carolina Department of Labor, Apprenticeship and Training Division. The Division provides free assistance to the employer and to the apprentice and certifies both the training program and the newly trained journeyman.
- Application of high school apprenticeship hours and experience toward an adult apprenticeship leading to a completed journeyman certificate.
- About 500 to 1,000 hours of on-the-job training for each year of participation during high school. The high school student can begin when he/she turns 16 years of age and is part of the high school apprenticeship program.

Cooperative Education

Cooperative workforce development education provides on-the-job training for students through a cooperative agreement among the school, the employer, and the student. A cooperative education coordinator is responsible for providing classroom instruction related to the occupation in which the student is placed and for contact with the student and the appropriate supervisor at the training site. Written training agreements and written training plans between the school and the employers are cooperatively developed and available. Such agreements include:

- Provisions for the employment of student workers in conformity with federal, state, and local laws and regulations and in a manner not resulting in exploitation of such student workers for private gain.
- Related occupational instruction in school.
- Payment of the prevailing wage for employment to student workers and awarding school credit for on-the-job training.

In the classroom, students should receive instruction related to their on-the-job training experiences. A training plan jointly developed by the teacher coordinator and employer outlines the sequential classroom instruction and on-the-job training a student receives. The training plan is the base for evaluating the student's progress, on the job and in the classroom. Each cooperative student is coordinated and supervised by a teacher coordinator.

Students are to receive on-the-job training for a minimum of 450 hours during the school year and earn credit. This means that students work 15-20 hours per week at a training site.
Students may receive one unit of credit for each period spent in the classroom and another unit for the on-the-job training component.

Internship

Internships allow for additional development of workplace and technical competencies. Internships are an essential way for today's youth to experience the value of work, develop pride in work and mature personally. Many communities have opportunities for students to intern in an industry or to work with some community organization addressing a particular problem or need of the business/industry sector.

- *Internships* allow students to observe and participate in daily operations, develop direct contact with job personnel, ask questions about particular careers, and perform certain job tasks. This activity is exploratory and allows the student to get hands on experience in a number of related activities.
- *Career major internships* deviate from the traditional internship in that the workplace activity is directly related to classroom instruction and the career path of the student. A minimum of 160 hours should be completed.

Possibilities are limited only by the imagination of the students, the staff, and the employment community. The teacher, student, and the business community jointly plan the organization, implementation, and evaluation of an internship.

School-based Enterprises

A school-based enterprise engages students in providing services or the production of goods for sale through a school sponsored activity. Individual or sequenced high school courses are set up as actual student-run businesses. Participants learn entrepreneurship, application of skills and knowledge from other courses, and enhance their personal development.

Production work activities are also school-based and are performed by workforce development classes under contract with a second party for remuneration. These activities (e.g., live projects) have always been a vital part of the vocational education delivery system and are among the most effective instructional methods for developing student competence.

Job Shadowing

Job shadowing is an unpaid short term activity that exposes the student to the workplace. The student is allowed to observe an experienced skilled worker in an actual work setting. Job shadowing heightens student understanding of potential career opportunities and depicts a clear connection between the classroom and the workplace. The duration of this activity could be a half day or longer depending on the needs of the student and work place.

Service Learning

Service learning is a method by which students learn and develop through active participation in thoughtfully organized service and community service experiences. This method provides students with opportunities to use newly acquired skills and knowledge in real-life situations in their own communities.

Career Academies

Career academies are designed to integrate academic and workforce curricula organized around a theme (health careers, electronics, banking, etc.) They encompass a set of jobs ranging from those that require no postsecondary education to those that require advanced degrees. Academies have the following common characteristics:

- Each academy is organized as a "school within a school" where students take a sequence of courses together.
- Each academy has a particular vocational, occupational or industrial theme.
- Each academy enlists the active involvement of local employers in the related sector.

Local employers are involved in the development and implementation of the curriculum. Employers may also provide equipment, serve as mentors and offer summer work experiences.

Contracts and Agreements

Where conditions are not feasible to establish a regular in-school workforce development program, the following alternatives are available:

- Establish a contract or agreement with a private industry, business, training agency, or community/technical college.
- Employ temporary, part-time, hourly personnel for short-term instructional needs.

All contracts, agreements, and part-time or hourly personnel must meet the procedures outlined in the *Workforce Development Fiscal and Policy Guide.*

COURSE OFFERINGS

Local Course Options

Workforce development education courses may be offered in grades 6-12. These course offerings are shown by program areas on pages 17-19. Course descriptions are given in Part II.

A local education agency may request authorization for offering a course not listed on the course offerings chart by following the procedures outlined in Appendix B. This request must be prepared only once when courses are offered in a school system for the first time.

The following criteria should be used to help a local education agency determine whether to offer a specialized course.

1. The new course will satisfy a currently unfilled community need.
2. The new course is desired by local community and business leaders.
3. The career potential of this new course is permanent and not transitory or temporary in nature and is of sufficient size to assure employment opportunities to students.
4. The course offers attractive career and wage benefits to potential completers.
5. Qualified instructor is available.
6. Facilities, equipment, and appropriate instructional materials are available.
7. A curriculum framework is or can be developed which includes:
    - Competency and objective listing (blueprint) verified by business and industry.
    - Content outline.
    - Pre- and postassessment to show mastery and gain scores.

Examples of local program offerings are listed on page 20. Some curriculum materials for these courses are available from the Department of Public Instruction.

Workforce Development Education Course Offerings
Grades 6-12

Program Areas	Grades 6-8	High School Levels			
		Level 1	Level 2	Level 3	Level 4
Agricultural Education	Exploring Biotechnology (Grades 7-8)	Agriscience Applications	Agricultural Engineering Technology I	Agricultural Engineering Technology II	
			Horticulture I	Horticulture II	
			Animal Science I	Animal Science II	
			Environmental & Natural Resources Studies I	Environmental & Natural Resources Studies II	
			Agricultural Production & Management I	Agricultural Production & Management II	
				Agricultural Work Development I	Agricultural Work Development II
					Agricultural Education Advanced Studies
Business Education	Keyboarding Middle Grades (MG)	Principles of Business	Business and Electronic Communications	Business Law	Business Management & Applications
	Business Computer Technology (Grades 7-8)	Computer Applications I	Computer Applications II		
			Computerized Accounting I	Computerized Accounting II	
	Exploring Business and Marketing (Grades 7-8)	Keyboarding – High School (HS)		Network Administration I	Network Administration II
				Small Business/ Entrepreneurship	
				Business and Financial Management I	Business and Financial Management II
					Business Advanced Studies
Career Development	Exploring Career Decisions	Workplace Readiness			
Family and Consumer Sciences Education	Exploring Life Skills (Grades 7-8)	Teen Living		Life Management	
		Foods and Nutrition		Culinary Arts and Hospitality I	Culinary Arts and Hospitality II
				Food Science	
		Interior Design and Housing		Interior Design Services I	Interior Design Services II
		Parenting and Child Development		Early Childhood Education I	Early Childhood Education II
		Clothing Design		Community and Family Services I	Community and Family Services II
				Human Services Work Development I	Human Services Work Development II
					Family and Consumer Sciences Advanced Studies
Health Occupations Education		Biomedical Technology	Allied Health Sciences I	Allied Health Sciences II	Health Sciences Advanced Studies
		Health Team Relations	Medical Sciences I	Medical Sciences II	

Continued

Workforce Development Education Course Offerings
Grades 6-12

Program Areas	Grades 6-8	High School Levels			
		Level 1	Level 2	Level 3	Level 4
Marketing Education		Principles of Business	Marketing Fashion Merchandising	Travel Tourism and Recreation Marketing Small Business/ Entrepreneurship Marketing Management Strategic Marketing	Marketing Technology and Media
				Business and Financial Management I	Business and Financial Management II Marketing Advanced Studies
Technology Education	Exploring Technology Systems (Grades 7-8)	Fundamentals of Technology	Communication Systems Manufacturing Systems Structural Systems Transportation Systems		Technology Studies
			Principles of Technology I	Principles of Technology II	

Continued

Workforce Development Education Course Offerings
Grades 6-12

Program Areas	High School Levels			
	Level 1	Level 2	Level 3	Level 4
Trade and Industrial Education	Introduction to Trade and Industrial Education		Trade & Industrial Work Development I	Trade & Industrial Work Development II
				Trade and Industrial Advanced Studies
		Communications Drafting I	Drafting - Architectural II	Drafting - Architectural III
			Drafting - Engineering II	Drafting - Engineering III
		Printing Graphics I	Printing Graphics II	Printing Graphics III
		Scientific and Technical Visualization I	Scientific and Technical Visualization II	
		Construction Construction Technology I	Construction Technology II	Construction Technology III
			Cabinetmaking II	Cabinetmaking III
		Electrical Trades I	Electrical Trades II	Electrical Trades III
		Masonry I	Masonry II	Masonry III
		Manufacturing Electro-Mechanical Technology I	Electro-Mechanical Technology II	Electro-Mechanical Technology III
		Electronics I	Electronics II	Electronics III
		Metals Manufacturing Technology I	Metals Manufacturing Technology II	Metals Manufacturing Technology III
		Textile Technology I	Textile Technology II	Textile Technology III
		Welding Technology I	Welding Technology II	Welding Technology III
		Public Service	Cosmetology I	Cosmetology II
		Transportation Automotive Service Technology I	Automotive Service Technology II	Automotive Service Technology III
			Collision Repair Technology II	Collision Repair Technology III

Local Course Options

- Agricultural Education
  - Aquaculture
  - Agribusiness I and II
  - Biotechnology & Agriscience Research I and II

- Business Education
  - Business Computer Programming
  - Desktop Applications
  - Notetaking/Speedwriting
  - Office Technology and Procedures I and II
  - Shorthand

- Family and Consumer Sciences Education
  - Apparel Design Services

- Marketing Education
  - Advertising and Sales Promotion
  - Fashion Merchandising and Management
  - International Marketing
  - Sales Fundamentals

- Trade and Industrial Education
  - Aerospace
  - Air Conditioning/Refrigeration
  - Appliance Repair
  - Blueprint Reading
  - Computer Engineering Technology and Repair
  - Commercial Art
  - Diesel Mechanics
  - Law Enforcement
  - Marine Occupations
  - Photography
  - Plumbing
  - Programming & Broadcasting
  - Upholstery

MIDDLE GRADES
WORKFORCE DEVELOPMENT EDUCATION

PROGRAM DESCRIPTION

Career development is a lifelong process by which individuals develop and refine their self-identity as it relates to life and employment decisions. Middle grades students have reached a critical age where they can explore career decision making and develop future educational plans. Career development experiences for middle grades students are designed to be exploratory in nature and do not develop specific skills, except in Business Computer Technology and Keyboarding-Middle Grades (MG). However, in the other five middle grades courses, students will develop a knowledge of self and the world of work and begin a career development planning process for bringing the two together.

Design

Curriculum design, materials, and teaching strategies take into account the characteristics, nature, and learning styles of the middle grades student. Teaching strategies recommended for all course offerings include:

1. Hands-on approaches
2. Cooperative learning
3. Inquiry methods
4. Community involvement
5. Integration of academic skills

Commonalities among all course offerings include:

1. Critical and creative thinking
2. Communication skills
3. Problem solving
4. Leadership/citizenship
5. Career information and planning
6. Impact of technology

It is recommended that Exploring Career Decisions be the first experience in any given sequence. Local school systems should select courses that will provide a continuum of experiences for the middle grades learner. These courses will provide building blocks from which students may choose based on the results of their interest inventories and assessments. Development of an individual career development plan should be the outcome of the middle grades experience.

Opportunities for leadership development and further application of instructional competencies are provided through student participation in Career Exploration Clubs of North Carolina (CECNC) or a program area vocational student organization. Options include: FBLA, FFA, FHA/HERO, or TSA.

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PROGRAM UNIQUENESS

Keyboarding and Business Computer Technology taught at the middle school level are designed to provide the same preparation and skill competence as Keyboarding taught at the high school level. Keyboarding-Middle Grades (MG) and Business Computer Technology should not be the sole provider of computer skill exposure at the middle grades. A combination of Keyboarding-Middle Grades (MG) and Business Computer Technology is designed to reinforce and compliment the computer skills being integrated throughout the elementary and middle school curriculum.

MAJOR PROGRAM OUTCOMES

The career development program at the middle grades level is designed to assist students in:

1. Making wise decisions about choices related to themselves and to the world of work.
2. Developing an individual career development plan.

NATIONAL CURRICULUM STANDARDS

In 1986, the National Occupational Information Coordinating Committee (NOICC) launched the National Career Development Guidelines initiative. These guidelines have been endorsed by the North Carolina State Board of Education and are being implemented in educational programs throughout the state. The guidelines reflect professional consensus in three main areas:

1. Competencies and indicators for individual growth in self-knowledge, educational and occupational exploration, and career planning.
2. Organizational capabilities to support competency-based career development programs.
3. Professional competencies that counselors and other staff must possess to deliver an effective career development program.

Education is a continuum that helps us take advantage of the opportunities in the workplace and to adapt to changing skill needs. Career development plays a key role in this continuum and the National Career Development Guidelines clearly recognize that need.

COURSE OFFERINGS

Middle Grades Course Offerings, Grades 6-8, are the following:

Grades 6-8	Grades 7-8
Exploring Career Decisions	Exploring Biotechnology
Keyboarding-Middle Grades (MG)	Exploring Business and Marketing
	Exploring Life Skills
	Business Computer Technology
	Exploring Technology Systems

Courses are shown at the first grade level at which they may be offered.

Course Descriptions for Middle Grades Workforce Development Education

Business Computer Technology

Course Number: 6400
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 67-90

This course is designed to provide hands-on instruction in basic computer hardware concepts and software applications. Emphasis is placed on extending and reinforcing touch keyboarding skills, while providing experience for learning word processing, database, spreadsheet, graphic, and telecommunication applications. Communication skills and basic mathematical concepts are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and job shadowing. Simulations, projects, teamwork and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Keyboarding-Middle Grades (MG)
Students enrolled in this course should have already aquired basic keyboarding, formatting, and proofreading skills.

Exploring Biotechnology

Course Number: 6828
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course provides instruction focused on the interrelationship of science and technology and the impact of this technology on agriculture, medicine and health care. Topics include biotechnology concepts, biomedical services, natural resources, environmental science, genetic engineering, agriscience, and global issues. Skills in mathematics, science, and language are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, field trips, shadowing, and supervised agricultural experience. Teaching strategies will encourage the development of essential skills and knowledge of the world of work and careers in biotechnology. This course contributes to the development of a career development plan.

Prerequisite

None

Exploring Business and Marketing

Course Number: 6208
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course is designed to explore the nature of business in an international economy and to study related careers in fields such as financial services, fashion merchandising, information systems, marketing, office systems technology, public relations and promotion, and travel and tourism. Emphasis is on using the computer while studying applications in these careers along with problem solving and thinking skills. Communication and mathematical skills are reinforced as students explore business applications and careers. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA

Continued on next page

leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies. This course contributes to the development of a career development plan.

Prerequisite None

Exploring Career Decisions

Course Number: 6158
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course is designed to provide an orientation to the world of work. Experiences are designed to introduce students to the technical nature of today's world and the role of productive workers. Activities enable students to increase self-awareness and make wise educational and occupational decisions as they plan for careers. Opportunities for leadership development and further application of instructional competencies are provided through Career Exploration Clubs of North Carolina (CECNC). The formal career development planning process often begins within this course.

Prerequisite None

Exploring Life Skills

Course Number: 7018
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course explores life management skills essential to the work of the family. Topics include resource management, nutrition and wellness, personal and social responsibility, fashion and appearance, and career development. The focus is on developing a foundation for the application of life management skills. Skills in applying basic academic skills, problem solving, decision making, and creative and critical thinking are reinforced in this course. This course also contributes to the development of the career development plan. Work-based learning strategies appropriate for this course are field trips, job shadowing, and service learning. Life skills development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and work-place readiness skills to authentic experiences.

Prerequisite None

Exploring Technology Systems

Course Number: 8108
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course is designed to allow students to explore basic technological concepts and related career fields. Topics include technology systems, technical drawing, graphic design, modeling skills, computer systems, electronics, and audio/visual production. Activities are structured to integrate physical and social sciences, mathematics, language, and fine arts. This course contributes to the development of a career development plan. Work-based learning strategies appropriate for this course include job shadowing and field trips. Exploring Technology Systems and TSA technical and leadership activities enhance the students' appreciation of technical and engineering career fields.

Prerequisite None

Keyboarding-Middle Grades (MG)

Course Number: 6511
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 67-90

This course is designed to teach basic keying skills, which consist of fluent manipulation of letter, figure/symbol, and basic service keys by "touch." Emphasis is on daily use of a computer system and appropriate software to provide integrated training through a learn/practice/sustain/assess plan of skill building. Communication skills are reinforced as students format, compose, and proofread. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite: None

FOR MORE INFORMATION

Middle Grades Consultant
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 North Wilmington St.
Raleigh, North Carolina 27601-2825

AGRICULTURAL EDUCATION

PROGRAM DESCRIPTION

Agricultural Education provides students with the opportunity to participate in coordinated group and individual instructional activities that are focused on preparation for future careers in agriculture. The agricultural education program is designed to develop technical, leadership, and management expertise needed by middle and high school students preparing for careers in agricultural occupations and to further education in an agriculturally-related field.

Agriculture encompasses various elements of the food, fiber, and natural resource systems. Agricultural employment is broadly defined to include careers that require agricultural knowledge, skills, and attitudes needed in producing, managing, processing, marketing, distributing, regulating, or protecting any of the renewable resources. Formal instruction may also be provided for out-of-school youth and adults who wish to upgrade their agricultural skills and knowledge.

DESIGN

The agricultural education program is built on the three core areas of classroom/laboratory instruction, supervised agricultural experience programs, and FFA student organization activities/opportunities. The agricultural education program is designed for delivery through these three core educational strategies:

- Classroom/Laboratory Instruction - quality instruction in and about agriculture that utilizes a "learning by doing" philosophy.
- Supervised Agricultural Experience Programs (work-based learning experiences) - all students are expected to have an agriculturally-related work-based learning experience while enrolled in agricultural education courses.
- FFA Student Organization activities/opportunities - FFA activities are an integral part of the agricultural education program that all agricultural education students should participate in if they are to fully benefit from their agricultural education enrollment (opportunities for the development of life skills necessary for career success are provided through FFA membership and involvement).

A quality agricultural education program has a balanced utilization of these three core educational strategies.

The National Strategic Plan for Agricultural Education (1995) states that the mission of agricultural education is to prepare and support individuals for careers, build awareness, and develop leadership for the food, fiber, and natural resources systems. In 1996, a National Agricultural Biotechnology Standards sponsored by the United States Department of Education indicated *that employment in this burgeoning new field will be plentiful beyond the year 2000*. This national mission and employment outlook provide the framework upon which the North Carolina agricultural education program's curriculum is built.

MAJOR PROGRAM OUTCOMES

The major program outcomes for students enrolled in an agricultural education program are as follows:

1. Opportunity to explore career options available in agri-related fields and to assist them in planning for a future career.
2. Technical skills training for success in an agri-related career.
3. Connectivity of school-based instruction with work-based learning.
4. Leadership and personal development training needed to succeed in an agri-related career including teamwork, problem-solving, and communications.
5. Competitive advantage for students to succeed in an international economy.
6. Commitment to community development and service through projects that require interaction with parents, agribusiness leaders, civic organizations, etc.
7. Development of skills necessary for lifelong learning in agriculture leading to career advancement and success.

PROGRAM UNIQUENESS

The agricultural education program includes program offerings for students in grades 7-12. Students may choose to enter and progress through one of several agricultural education career pathways in order to achieve their career major within the program. The determination of offerings should be based on an assessment that includes a combination of student needs/interests, program enrollment, qualified teaching faculty, industry needs, and community interest/resources.

Exploring Biotechnology may be offered in grades 7-8 as a part of a middle grade workforce education program. Agriscience Applications is a recommended entry level course for students enrolled in grades 8 through 12, but is not a requirement for progressing to a higher level course. Level I and Level II courses are recommended for students enrolled in grades 9 through 12. Agricultural Work Development I and II are offered as options for those students completing a Level I course. Local agricultural education course options may be offered for students by the local school system after they have completed the Level I and Level II courses. Agricultural Advanced Studies is offered to agricultural education students in their senior year as a course option to demonstrate their ability to use content and apply knowledge to real-world situation in a career major.

COURSE OFFERINGS Agricultural Education course offerings, grades 7-12, are the following:

Grades 7-8	Levels			
	Level 1	Level 2	Level 3	Level 4
Exploring Biotechnology	Agriscience Applications	Agricutural Engineering Technology I	Agricultural Engineering Technology II	
		Horticulture I	Horticulture II	
		Animal Science I	Animal Science II	
		Environmental & Natural Resources Studies I	Environmental & Natural Resources Studies II	
		Agricultural Production & Management I	Agricultural Production & Management II	
			Agricultural Work Development I	Agricultural Work Development II
				Agricultural Education Advanced Studies

Agricultural Education Course Descriptions

Agriscience Applications
Course Number: 6810
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides instruction that focuses on integrating biological/physical sciences with technology as related to the environment, natural resources, food production, and science and agribusiness. Topics of instruction include agricultural awareness and literacy, leadership and FFA, employability skills, introduction to all aspects of the total agricultural industry. Skills in biology, language, writing, computers, math, and physics are reinforced in this course. Work-based learning strategies appropriate for this course are: field trips, shadowing, agriscience projects, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite None

Agricultural Advanced Studies
Course Number: 6899
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This is a three-phased exit course for seniors that is career-focused in agricultural education. The three components of the program include a research paper, a product, and a presentation. Students demonstrate their ability to use content and apply knowledge to real-world situations in a career major. In addition, they will also demonstrate their ability to write, speak, apply knowledge, problem-solve, and use life skills such as time management, planning, follow-through, and organization. Students work under the guidance of a teacher facilitator in collaboration with community members, business representatives and other school-based personnel.

Prerequisite Three technical credits in a career major.

Agricultural Engineering Technology I
Course Number: 6831
Recommended Maximum Enrollment: 20
Recommended Hour of Instruction: 135-180

This course provides instruction to develop knowledge and technical skills in the broad field of agricultural machinery, equipment, and structures. The primary purpose of this course is to prepare students to handle the day-to-day problems, accidents, and repairs needs they will encounter in their chosen agricultural career. Topics include agricultural mechanics safety, agricultural engineering career opportunities, hand/power tool use and selection, electrical wiring, basic metal working, basic agricultural construction skills related to plumbing, concrete and carpentry, basic welding, and leadership development. Skills in physics, geometry, and algebra are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, field trips, shadowing, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite None

Agricultural Engineering Technology II

Course Number: 6832
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers instruction that expands upon the knowledge and skills learned in Agricultural Engineering Technology I. This course prepares students for an agricultural career in the agricultural engineering field. The topics of instruction emphasized are non-metallic agricultural fabrication techniques, metal fabrication technology, safe tool and equipment use, human resource development, hot/cold metal working skills and technology, advanced welding and metal cutting skills, working with plastics, and advanced career exploration/decision-making. Skills in physics, geometry, and algebra are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, internships cooperative education, apprenticeship, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: Agricultural Engineering Technology I

Agricultural Production and Management I

Course Number: 6811
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides instruction that focuses on the basic scientific principles and processes related to the production of plants and animals for the food and fiber system. Topics of instruction include basic understanding of the livestock/poultry industry and its various components, career opportunities, soil science, crop science/agronomy, weed science, basic agricultural machinery and related industry careers, environmental stewardship, and leadership/personal development. Skills in algebra and biology are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, internships, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: None

Agricultural Production and Management II

Course Number: 6812
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides instruction that expands the scientific knowledge and technical skills developed in Agricultural Production and Management I with heavy emphasis on topics including pesticide use and safety, herbicide use and safety, wildlife habitat concerns, irrigation, agricultural equipment technology and safety, global industry issues, career planning, and human resource development. Skills in algebra and biology are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, supervised agricultural experience, and apprenticeship. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: Agricultural Production and Management I

Agricultural Work Development I

Course Number: 6861
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180
Plus paid work experience

This course provides instruction through a combination of classroom, laboratory and supervised on-the-job training in agri-related careers. Topics include occupational orientation, technical training related to the career area in which students are focused, and employability skills as outlined in the SCANS report. Skills reinforced in this course include technical mathematics, language, and writing. This entire course focuses on work-based learning experiences. FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: Completion of Level I in any cluster.

Agricultural Work Development II

Course Number: 6862
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180
Plus paid work experience

This course covers instruction that expands the knowledge and skills developed in Agricultural Work Training I with a heavy emphasis on topics related to strengthening public relations, communications, resume writing, interviewing, and other soft skills to better prepare students for the world of work. Skills reinforced in this course include technical mathematics, language, and writing. This entire course focuses on work-based learning experiences. FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: Agricultural Work Development I

Animal Science I

Course Number: 6821
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides instruction focused on the basic scientific principles and processes that are involved in animal physiology, breeding, nutrition, and care in preparation for an animal science career major. Topics include animal diseases, introduction to animal science, animal nutrition, animal science issues, career opportunities, and animal evaluation. Skills in biology, chemistry, and algebra are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, internships, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: None

Animal Science II

This course covers instruction that expands upon the scientific knowledge and skills developed in Animal Science I to include more advanced scientific, computation, and communication skills are developed in animal science. Topics include animal waste management, animal science economics, decision making, global concerns in

Continued on next page

Course Number: 6822
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

the industry, genetics, and breeding. Content knowledge in biology, chemistry, and algebra are reinforced in this class. Work-based learning strategies appropriate for this course are agriscience projects, internship, cooperative education, apprenticeship and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: Animal Science I

Environmental and Natural Resources Studies I

Course Number: 6851
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides an introduction to environmental studies, which include topics of instruction in renewable and non-renewable resources, history of the environment, personal development, water and air quality, waste management, land use regulations, soils, meteorology, fisheries, forestry, and wildlife habitat. Skills in biology and algebra are reinforced in this class. Work-based learning strategies appropriate for this course are agriscience projects, field trips, shadowing, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: None

Environmental and Natural Resources Studies II

Course Number: 6852
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers instruction that expands the knowledge and skills developed in Environmental Studies and Natural Resource Management I with heavy emphasis on instruction in best management practices and skills in methods of environmental monitoring and conservation, air and water regulations, sampling methodologies, prescribing conservation techniques, wildlife, and forestry management. Skills in biology, chemistry, and algebra are reinforced in this class. Work-based learning strategies appropriate for this course are agriscience projects, field trips, shadowing, cooperative education, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite: Environmental and Natural Resource Studies I

Exploring Biotechnology

Course Number: 6828
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course provides instruction focused on the interrelationship of science and technology and the impact of this technology on agriculture, medicine and health care. Topics include biotechnology concepts, biomedical services, natural resources, environmental science, genetic engineering, agriscience, and global issues. Skills in mathematics, science and language are reinforced in this course. This course contributes to the development of a career development plan. Work-based learning strategies appropriate for this course are projects, field trips, and shadowing. Teaching strategies will encourage the development of essential skills and knowledge of the world of work and careers in biotechnology.

Prerequisite None

Horticulture I

Course Number: 6841
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides instruction on the broad field of horticulture with emphasis on the scientific and technical knowledge for a career in horticulture. Topics in this course include plant growth and development, plant nutrition, media selection, basic plant identification, pest management, chemical disposal, customer relations, career opportunities, and leadership development. Skills in biology, chemistry, and algebra are reinforced in this course. Work-based learning strategies appropriate for this course are agriscience projects, internships, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite None

Horticulture II

Course Number: 6842
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers instruction that expands the scientific knowledge and skills developed in Horticulture I to include more advanced scientific, computation, and communication skills needed in the horticulture industry. Topics include greenhouse plant production and management, bedding plant production, watering systems, light effects, basic landscape design, installation and maintenance, lawn and turfgrass management, career planning, and leadership/personal development. Skills in biology, chemistry, and algebra are reinforced in this class. Work-based learning strategies appropriate for this course are agriscience projects, cooperative education, apprenticeship, and supervised agricultural experience. Supervised agricultural experience programs and FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies.

Prerequisite Horticulture I

LOCAL COURSE OPTIONS

Schools may offer one or more specialized courses not included in the Programs of Study. These courses should meet a local economic need. Options may include:

Aquaculture
Agribusiness I & II
Biotechnology & Agriscience
  Research I & II

Refer to Part I, Local Course Options, and Appendix B for instructions on how to offer these courses.

FOR MORE INFORMATION

Agricultural Education
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Education
301 North Wilmington Street
Raleigh, NC 27601-2825

or

Agricultural Education
North Carolina State University
Department of Agricultural and Extension Education
Ricks Hall, #6
Raleigh, NC 27695-7607
(919) 515-1681

BUSINESS EDUCATION

PROGRAM DESCRIPTION

Business Education is a broad, comprehensive curriculum at the middle and high school levels that provides students with meaningful instruction for and about business. Instruction in Business Education encompasses business skills and techniques, an understanding of basic economics, and business attitudes essential to participate in the international marketplace as productive workers and consumers.

The public schools of North Carolina have a responsibility to provide a competent, business-literate, and skilled workforce. Business Education is critical to this process! Business Education is for every student because it is designed to integrate business and computer technology skills into the high school curriculum. Therefore, a Business Education course should be part of the curriculum for each student. Business Education has relevance and helps young adults to manage their own financial affairs and make intelligent consumer and business-related choices.

Design

Business Education is designed to prepare graduates as viable competitors in the business world and for advanced educational opportunities. The instructional program begins in the middle grades with exploratory experiences leading to career decisions and the development of proficiency in operating a computer keyboard using the touch system and using basic computer software applications. It continues at the high school level with career majors that provide knowledge/skill development in:

- Accounting and Finance
- Business Administration
- Business Management and Small Business/Entrepreneurship
- Information Systems
- Office Systems Technology

The basic skills of reading, writing, and computation are an integral part of the business program. Computer literacy and proficiency in the various applications are emphasized. Development of human relations/interpersonal, employability, economic, and entrepreneurial skills is a part of each of the career majors. Opportunities to develop and apply leadership, social, civic, and business-related skills are provided through Future Business Leaders of America (FBLA), the vocational student organization for business students. Integration of the entire business program with appropriate academic concepts/courses is strongly encouraged.

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MAJOR PROGRAM OUTCOMES

Business Education prepares students for successful transition from school to work as it empowers them to use business principles and concepts as they manage their current and future responsibilities as informed consumers and productive workers. The Business Education program equips students to demonstrate they have the following traits:

- Technology users who utilize technological tools and resources to complete tasks, solve problems, and make decisions.
- Quality producers who create intellectual, artistic, practical, and physical products that reflect high quality standards. Product results conform with business/industry standards of being complete, correct (within quality standard limits), and on time.
- Self-directed learners who create a positive vision for themselves and their future, set priorities and achievable goals, create options for themselves, monitor and evaluate their progress, and assume responsibility for themselves.
- Collaborative contributors who use effective leadership and group skills to develop and manage interpersonal relationships within economically, culturally, and organizationally diverse settings in a international environment.
- Effective communicators who read, listen, analyze, interpret, and respond in order to convey significant messages to others and to receive, interpret, and utilize the messages of others.
- Empowered individuals with background information for further study in the field of business, employment, and advancement in a business career.
- Confident and competent workers as a result of work-based learning and FBLA activities, which allow skill application and leadership development in business settings.

NATIONAL VOLUNTARY SKILL STANDARDS

The Center for Occupational and Research Development (CORD) convened a committee of incumbent administrative support workers from ten states to do a modified DACUM. They reviewed the competency statements, tasks, standards, and job titles for administrative support workers. Based on an Occupational Inventory of Skills for Administrative Support Occupations, V-TECS and Professional Secretaries International (PSI) administered surveys to more than 1,000 PSI members in 40 states. Core and specific tasks were identified to assist in matching knowledges, abilities, and interests to create a clear set of performance expectations based on current administrative support practices. *The Skill Standards for Administrative Support Occupations* document, completed in 1996, was used in developing blueprints for this *Programs of Study*.

NATIONAL CURRICULUM STANDARDS

The National Standards for Business Education were developed by business people and members of the National Business Education Association during 1995. These voluntary national curriculum standards have created a rational structure for the Business Education curriculum. The 12 essential areas such as computation, economics and personal finance, international business, and management have been incorporated into the Business Education career majors and course blueprints. Students completing career majors in business will be prepared broadly with principles and concepts as business has directed.

STUDENT CREDENTIALING AND CERTIFICATION

Most businesses focus on skills acquired through course work and work-based learning experiences in deciding if prospective employees can perform in their workplace. Building a portfolio as students progress through the Business Education courses is one way to show the skills they can use effectively.

Students desiring a universally recognized credential for the workplace that is computer related should enroll in a career major that leads them to the Certified Network Administrator credential. This high school credential can be enhanced at postsecondary levels or may be used immediately in the workplace.

The Office Proficiency Assessment and Certification (OPAC) is available for students seeking certification in administrative support positions. Certified Professional Secretary (CPS) certification is available for students who desire to have one of the most prestigious credentials for administrative support personnel. These certification programs are supported by Professional Secretaries International.

PROGRAM UNIQUENESS

Keyboarding is essential to success in all business occupations. Keyboarding is any input activity involving the manipulation of the letter and figure keys, space bar, return key, tab, and shift keys by the use of a touch system. This skill is essential if students are to interact with a computer in the most effective manner.

Touch keyboarding is an essential skill for students to be proficient in today's computerized workplaces. Each course in a business career major requires the use of the computer. For students to succeed in these courses, they must have keying skills and basic computer skills that allow them to perform at acceptable levels.

Local education agencies are encouraged to have students demonstrate competence in basic keyboarding and business computer usage. Through an assessment that focuses on speed, accuracy, formatting, and proper techniques, trained business educators can determine the level of competence in keyboarding and basic computer usage. By administering selected timed writings and formatting assessments to all students in the middle/junior high, the students can be counseled into proper courses in the high school.

Keyboarding-Middle Grades (MG) and Business Computer Technology, taught at the middle grades level, are designed to provide the same preparation and skill competence as Keyboarding-High School (HS) taught at the high school level. Keyboarding MG and Business Computer Technology should not be the sole provider of computer skill exposure at the middle grades. A combination of Keyboarding MG and Business Computer Technology is designed to reinforce and complement the computer skills being integrated throughout the elementary and middle grades curriculum. Keyboarding HS is designed for students not obtaining keyboarding instruction at the middle grades level or not meeting the minimum skill level necessary for high school level Business Education courses.

The Business Education career majors are designed broadly with foundational skills at levels 1 and 2. As the students progress into levels 3 and 4, they begin to specialize into a career cluster. These career majors are designed to allow the students to articulate into the postsecondary programs to gain the appropriate degree of specialized training they desire.

COURSE OFFERINGS

Business Education course offerings, grades 6-12, are the following:

Grades 6-8	Levels			
	Level 1	Level 2	Level 3	Level 4
Keyboarding-Middle Grades (MG)	Principles of Business	Business and Electronic Communications	Business Law	Business Management & Applications
Business Computer Technology	Computer Applications I	Computer Applications II		
Exploring Business and Marketing		Computerized Accounting I	Computerized Accounting II	
	Keyboarding High School (HS)		Network Administration I	Network Administration II
			Small Business/ Entrepreneurship	
			Business and Financial Management I	Business and Financial Management II
				Business Advanced Studies

Business Education Course Descriptions

Business Computer Technology

Course Number: 6400
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 67-90

This course is designed to provide hands-on instruction in basic computer hardware components and software applications. Emphasis is placed on extending and reinforcing touch keyboarding skills, while providing experience for learning word processing, database, spreadsheet, graphic, and telecommunication applications. Communication skills and basic mathematical concepts are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Keyboarding MG
Students enrolled in this course should have already acquired basic keyboarding, formatting, and proofreading skills.

Business and Electronic Communications

Course Number: 6535
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course provides students essential competencies for oral and written communications in the technological workplace. Emphasis is placed on utilizing the computer to develop written communication skills such as composing memos, letters, and reports; describing processes or mechanisms; and completing forms and responding to e-mail. Utilizing technology (presentation software and telecommunications) to develop oral communication skills such as delivering oral presentations, giving instructions, interviewing for information, and presenting information/reports in an effective manner are reinforced in this course. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Business Advanced Studies

Course Number: 6599
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This is a culminating course for seniors that is career focused in Accounting and Finance, Business Administration, Business Management and Ownership, Information Systems, and Office Systems Technology in the business technologies pathway. The three parts of the course include writing a research paper, producing a product, and delivering a presentation. Students demonstrate their abilities to use content and apply knowledge to professional business situations in a selected career. In addition, they will also demonstrate their ability to

Continued on next page

write, speak, apply knowledge, problem solve, and use life skills such as time management and organization. Students work under the guidance of a teacher-advisor in collaboration with community members, business representatives, and other school-based personnel.

Prerequisites

Three Business or Marketing credits in a Business Technologies career major.

Business Law

Course Number: 6215
Recommended
Maximum
Enrollment: 26
Recommended Hours of
Instruction: 135-180

This course is designed to acquaint students with the basic legal principles common to business and personal activities. Topics include personal concepts to assist students when evaluating contracts, maximizing purchasing power through credit, purchasing appropriate insurance, and renting and owning real estate. Business concepts such as contracting, ethics, starting a business, hiring employees, managing employees, or representing other businesses as employee or contractor are included. Skills in critical thinking are reinforced in this course along with oral and written communication skills. Work-based learning strategies appropriate for this course are field trips and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Business and Financial Management I

Course Number: 6331
Recommended
Maximum
Enrollment: 26
Recommended Hours of
Instruction: 135-180

This course is designed as a study of financial and management concepts in a business environment. Topics of study include financial institutions/services, financial planning, consumer rights and responsibilities, credit, investing, and management. Mathematical, economics, and communication skills are reinforced as the students gain a better understanding of individual responsibilities to self, to society, and to personnel with whom they will work. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisites

Computerized Accounting I and Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Business and Financial Management II

Course Number: 6332
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed as an advanced study of financial and management concepts in a business environment. Topics of study include stocks, bonds, annuities, mutual funds, pensions, employment benefits, labor laws, tax laws, business forecasting, and management. Mathematical, economics, and communication skills are reinforced as the students gain a better understanding of business responsibilities to stockholders and personnel with whom they will work. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite: Business and Financial Management I

Business Management and Applications

Course Number: 6225
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers the organizational functions of businesses including total quality concepts, project management, and problem solving. Emphasis is placed on analyzing the social, technological, and organizational systems in businesses, such as human relations, communications, records management, and meeting and conference coordination. Skills in communications and mathematics are reinforced as the student uses the appropriate business technology to perform business applications. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisites: Computer Applications I and either Business and Electronic Communications or Computerized Accounting I

Computerized Accounting I

Course Number: 6311
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed to help students understand the basic principles of the accounting cycle. Emphasis is placed on analysis and the recording business transactions, preparation and interpretation of financial statements, accounting systems, banking and payroll activities, basic types of business ownership, and an accounting career orientation. Mathematical skills and critical thinking are reinforced. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite: Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter and unbound report; and exhibit proper keyboarding techniques.

Computerized Accounting II

Course Number: 6312
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed to provide students with an opportunity to develop in-depth knowledge of accounting procedures and techniques utilized in solving business problems and making financial decisions. Emphasis includes partnership accounting; adjustments and inventory control systems; budgetary control systems; cost accounting; and further enhancement of employment skills. Mathematics skills and critical thinking are reinforced. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite: Computerized Accounting I

Computer Applications I

Course Number: 6411
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed to help students master beginning and advanced skills in the areas of word processing, database management, and spreadsheet, telecommunications, and desktop tool applications. Emphasis is on concepts of desktop publishing and presentation graphics as well as skill development in computer application software; computer architecture; operating systems, environments and utilities; ethical issues pertaining to information systems; and computer information system careers. Communication skills and critical thinking are reinforced through the software applications. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite: Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Computer Applications II

Course Number: 6412
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed to help students master beginning and advanced skills in the areas of desktop publishing, presentation graphics, and integrated software applications while building mastery of telecommunications and on-line services. Emphasis is placed on skill development and refinement of skills in computer application software, common applications of computer information systems in organizations, computer systems planning and acquisition, systems analysis and design, information systems security, and the social and economic impact of computer information systems in an international marketplace. Communication skills and critical thinking are reinforced through the software applications. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Computer Applications I

Exploring Business and Marketing

Course Number: 6208
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course is designed to explore the nature of business in an international economy and to study related careers in fields such as financial services, fashion merchandising, information systems, marketing, office systems technology, public relations and promotion, and travel and tourism. Emphasis is on using the computer while studying applications in these careers along with problem solving and thinking skills. Communication and mathematics skill are reinforced as students explore business applications and careers. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies. This course contributes to the development of a career development plan.

Recommended prerequisite

Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter and unbound report; and exhibit proper keyboarding techniques.

Keyboarding Middle Grades (MG)

Course Number: 6511
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 67-90

This course is designed to teach basic keying skills, which consist of fluent manipulation of letter, figure/symbol, and basic service keys by "touch." Emphasis is on daily use of a computer system and appropriate software to provide integrated training through a learn/practice/sustain/assess plan of skill building. Communication skills are reinforced as students format, compose, and proofread. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

None

Keyboarding High School (HS)

Course Number: 6512
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed to teach basic keying skills, which consist of fluent manipulation of letter, figure/symbol, and basic service keys by "touch." Emphasis is on the daily use of a computer system to develop skills with concentrated application of these skills to the production of business correspondence. Communication skills are reinforced as the students format, compose, and proofread. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite None

Network Administration I

Course Number: 6341
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course is the first of two courses based on industry-validated skill standards that provide network administration curriculum to train students in the day-to-day administration of an installed network. Topics include introduction to networking, accessing network information and resources, file and directory management, and hardware configurations. Critical thinking skills are taught and reinforced in this course to prepare students for advanced network instruction. Work-based learning strategies appropriate to this course are internships, cooperative education and youth apprenticeship. Simulations, projects, teamwork and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite Computer Applications I

Network Administration II

Course Number: 6342
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course is the second of two courses of a certification program based on industry-validated skill standards. Topics in this course include networking fundamentals, security, administrator responsibilities, and documentation of work-based experiences. Critical thinking skills are taught and reinforced in this course to allow students to pass the exam to attain official certification. Work-based learning strategies appropriate to this course are internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite Network Administration I

Principles of Business

Course Number: 6200
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This is an introductory course covering principles and concepts that will be the foundation for future study of business and the management of work projects. Topics of study include basic business principles, management concepts, systems thinking and total quality, and the current environment for business in an international marketplace. Communication skills and basic mathematic concepts are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and job shadowing. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Small Business/ Entrepreneurship

Course Number: 6235
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction 135-180

This course introduces students to the rewards and risks of owning or operating a business enterprise. Emphasis is placed on the mastery of skills needed to plan, organize, manage, and finance a small business. Skills in communication, technical writing, math, research, and problem-solving are reinforced as each student prepares his/her own business plan. Work-based learning strategies appropriate for this course include cooperative education and paid/unpaid internships. Simulations, projects, teamwork, and FBLA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite None

LOCAL COURSE OPTIONS

Schools may offer one or more specialized courses not included in the *Programs of Study.* These courses should meet a local economic need. Options may include:

Business Computer Programming
Desktop Applications
Office Technology and Procedures I and II
Notetaking/Speedwriting
Shorthand

Refer to Part I, Local Course Options, and Appendix B for instructions on how to offer these courses.

FOR MORE INFORMATION

Business Education
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 North Wilmington Street
Raleigh, North Carolina 27601-2825

CAREER DEVELOPMENT

PROGRAM DESCRIPTION

Career development is comprised of those programs, services, and activities which result in the development and implementation of an appropriate Career Development Plan (CDP) for each workforce development enrollee. Organizationally, career development has two components: instructional courses and career development services.

Instructional Courses

Instructional courses are Exploring Career Decisions (6-8) and Workplace Readiness (9-12). Each is designed with stand-alone units which may be taught separately or in combination with one or more related units. Combination of all available units will produce comprehensive, full-length courses.

Opportunities for leadership development and application of instructional competencies for students enrolled in Exploring Career Decisions are provided through Career Exploration Clubs of North Carolina (CECNC), which should be an integral part of the instructional program.

MAJOR PROGRAM OUTCOMES

The major outcomes of the instructional component are:

1. The student will make wise decisions related to themselves and the world of work.
2. The student will develop and implement an individual career development plan (CDP).

Exploring Career Decisions is composed of three instructional units:

- Self-Awareness
- Career Exploration
- Career Planning

Units reflect commonalities with other middle grades workforce development education courses, including:

- Career information and planning
- Communication skills
- Critical and creative thinking
- Impact of technology
- Leadership/citizenship
- Problem solving

Four instructional units in Workplace Readiness are:

- Employment preparation
- Problem solving
- Self-management
- Teamwork

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To implement a comprehensive, full year course, exploratory units may be sequenced. Workplace Readiness may be followed by an appropriate work-based experience such as internship or apprenticeship.

Career Development Services

Career development coordinators or industry-education coordinators provide and coordinate career guidance and counseling activities, publicize workforce development programs, and promote business-education partnerships. The functions of these coordinators are grouped into the following five basic areas:

1. Preparatory services coordination
2. Case management coordination
3. Transitional services coordination
4. Promotional activities and public information coordination
5. Business-education partnerships coordination

MAJOR PROGRAM OUTCOMES

The major thrusts of career development coordination include the following:

1. Students are provided materials, occupational information, career guidance and counseling activities, and labor market information needed to enable them to make effective educational and career plans.
2. Each student enrolled in workforce development has a career development plan, including academic and workforce development courses, appropriate for a designated career objective, and postsecondary plans.
3. Support services are coordinated to meet the needs of students in successfully completing programs leading to high school graduation.
4. Students are involved in experiences designed to enable them to make smooth transitions from one level of workforce development to the next, and from school-to-work or further education.
5. Workforce development completers are to meet performance standards which relate to post-graduate job and/or educational placement.
6. The advantages and career opportunities of workforce development are promoted among students, parents and all segments of the community to facilitate the appropriate placement of workforce development program completers.
7. Through collaborative efforts with the business and industry community, business-education partnerships are created to assist students in developing the skills needed in today's workforce.

ELIGIBLE STUDENTS

Career development coordination contains career development services provided through preparatory and transitional services for students who:

1. Are enrolled in a workforce development education course.
2. Are registered to take a workforce development course.
3. Have indicated a career choice compatible with a workforce development education program.

School-wide and group activities provided by the coordinator may benefit other students. However, the focus must be on providing services for those students who fit in one of the three categories listed above.

Completers of a workforce development program may be served for a period of one year after graduation. Based on completer follow-up data, those completers who indicate they are unemployed and seeking full-time employment will be provided additional services. The recommended ratio of students per coordinator is one coordinator for 750 students, based on the school-wide enrollment.

SERVICE DELIVERY STRATEGIES

The activities and strategies for career development coordination in each LEA/school should be detailed in the Yearly Program Blueprint. Each career development coordinator, regardless of months of employment or source of funding, should coordinate a minimum of one activity from each of the five basic areas. The following list provides examples of appropriate activities for each of the five areas of service.

Preparatory Services Coordination

- Outreach and recruitment activities
- Career planning activities such as group guidance, interest, and aptitude assessments
- Development and dissemination of informational materials about opportunities in workforce development
- Preparation of students' education plans.

Case Management Coordination

- Career information center management
- Individual career counseling
- Vocational honor societies
- Collection and dissemination of labor market and student follow-up data
- Preparing and revising students' career development plans.

Transitional Services Coordination

- High school program placement
- Job placement
- Post-high school educational placement

- Collection and dissemination of information relating to career and educational opportunities
- Coordination of employability skills training
- Shadowing, internship, mentoring, and apprenticeship placements
- Visits to business, industry, military, and educational sites
- Job opportunities conventions; and career days.

Promotional Activities and Public Information Coordination

- Multi-media programs, displays and exhibits for workforce development functions, news media coverage, and printed materials such as brochures and tabloids.

Business/Education Partnerships Coordination

- Resource persons, support and assistance for workforce development projects and scholarships, and advisory councils coordination.

COURSE OFFERINGS

Career Development Course offerings, grades 6-12 are the following:

Grades 6-8	Levels			
	Level 1	Level 2	Level 3	Level 4
Exploring Career Decisions	Workplace Readiness			

Career Development Course Descriptions

Exploring Career Decisions Course Number: 6158 Recommended Maximum Enrollment: 18 Recommended Hours of Instruction: 67-90	This course is designed to provide an orientation to the world of work. Experiences are designed to introduce students to the technical nature of today's world and the role of productive workers. Activities enable students to increase self-awareness and make wise educational and occupational decisions as they plan for careers. Opportunities for leadership development and further application of instructional competencies are provided through Career Exploration Clubs of North Carolina (CECNC). The formal career development planning process often begins within this course.
Prerequisite	None
Workplace Readiness Course Number: 6145 Maximum Enrollment: 26 Recommended Hours of Instruction: 67-90	This course is designed to develop the fundamental attitudes and behaviors needed to secure employment and advance in a career. Skills are generic to all occupations and emphasize proficiency in the workplace, problem-solving, teamwork, and self-management. In addition, skills are developed which are specific to investigating, securing, and maintaining appropriate employment.
Prerequisite	None
FOR MORE INFORMATION	Career Development Consultant Workforce Development Education Division of Instructional Services North Carolina Department of Public Instruction 301 North Wilmington Street Raleigh, North Carolina 27601-2825

FAMILY AND CONSUMER SCIENCES EDUCATION

PROGRAM DESCRIPTION

Family and Consumer Sciences Education prepares students for careers working with individuals and families, as well as for competence in the work of their own families. The concept of work, whether in a family or career, is central to the program area. The program's unique focus is on families, work, and their interrelationships. Family and Consumer Sciences Education prepares individuals for family and career.

Family and Consumer Sciences Education is founded on six distinct core areas. The areas are:

- Consumer Education and Resource Management
- Family and Interpersonal Relationships
- Foods, Nutrition, and Wellness
- Interiors, Housing, and Design
- Human Development and Parenting Education
- Textiles, Apparel, and Fashion

Developmentally appropriate courses incorporate these six core areas, as well as academic integration and workplace applications, to prepare students to successfully manage individual, family, work, and community roles. Examples of workplace applications include basic skills, thinking skills, and personal qualities. Ultimately, students prepare to enter paid employment and to advance within a career with additional training and/or education.

Course Types

Family and Consumer Sciences Education consists of three types of courses.

- Foundation courses
- Specialized courses
- Career courses

Foundation Courses

In foundation courses, students develop the core knowledge they need to manage their lives. Foundation Courses are Exploring Life Skills, Teen Living, and Life Management.

Specialized Courses

In specialized courses, students further develop their technical knowledge and skills related to the work of the family and within their chosen career area. Specialized courses are Clothing Design, Foods and Nutrition, Interior Design and Housing, and Parenting and Child Development.

Career Courses

In career courses, students complete their high school career program by developing technical and employability skills. Work-based learning strategies are essential to complete a career area. Career courses are Community and Family Services I and II, Culinary Arts and Hospitality I and II, Early Childhood Education I and II, Family and Consumer Sciences Advanced Studies, Food Science, Human Services Work Development I and II, and Interior Design Services I and II. Career courses in the apparel design career area may be offered as a local program option.

Family and Consumer Sciences Education has six career majors.

- Apparel design
- Community and family services
- Culinary arts and hospitality
- Early childhood education
- Food science, dietetics, and nutrition
- Interior design

Each major is designed to offer students meaningful school-based and work-based learning as preparation for a range of entry-level positions, technical occupations, and professional careers.

FHA/HERO serves as the student organization for Family and Consumer Sciences Education. It is a co-curricular organization that is a vehicle for mastering Family and Consumer Sciences competencies through leadership, citizenship, and skill development. Members develop life skills through character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation.

MAJOR PROGRAM OUTCOMES

Family and Consumer Sciences Education prepares students for successful life management, employment, and career development. The overall program empowers students to:

1. Balance personal, home, family, and work lives.

2. Strengthen the well-being of individuals and families across the life span.

3. Become responsible citizens and leaders in family, community, and work settings.

4. Promote optimal nutrition and wellness across the life span.

5. Manage resources to meet the material needs of individuals and families.

6. Use critical and creative thinking skills to address problems in diverse family, community, and work environments.
7. Prepare for successful life management, employment, and career development.
8. Function as providers and consumers of goods and services.
9. Appreciate human worth and accept responsibility for one's actions and success in family and work life.

NATIONAL VOLUNTARY OCCUPATIONAL SKILL STANDARDS

The United States Departments of Education and Labor have initiated public-private partnerships to develop voluntary skill standards for various industries. They identified skills and performance levels needed by the American workforce to be competitive.

Family and Consumer Sciences Education links with the skill standards projects described below:

Apparel Design

- The Uniform and Textile Service Association (UTSA) sets skill standards for production workers and maintenance technicians in the industrial laundry. These skills apply to the apparel design career area.

Community and Family Services

- The Human Services Research Institute (HSRI) sets skill standards for the human services position of community support worker. These skills apply to Community and Family Services I & II.

Culinary Arts and Hospitality

- The Council of Hotel, Restaurant, and Institutional Education (CHRIE) sets skill standards for the food service positions of host, server, busser, and cashier/counter person in the hospitality and tourism industry. These skill standards apply to Culinary Arts and Hospitality I & II.

- The National Grocers Association (NGA) sets skill standards for customer service/stock associate and front-end associate. These skill standards apply to Culinary Arts and Hospitality I & II.

Interior Design Services

- The Foundation for Industrial Modernization (FIM) sets skill standards for computer aided drafting and design. These skill standards apply to Interior Design Services I & II.

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STUDENT CREDENTIALING AND CERTIFICATION

Students who complete both levels of Early Childhood Education may be recognized as "teachers" in accordance with G.S. 110-9118; 143 B-168.3. The Child Day Care Rules of North Carolina define "teacher" as the care giver who has responsibility for planning and implementing the daily program of activities for each group of children in a day care facility. These completers are entitled to the same benefits and are bound by the same requirements as other teachers in child care centers.

Food Handling Certification is offered by county health departments and independent consultants. To receive the credential, students must satisfactorily complete the "Serve Safe Food Service Manager Certification" course developed and promoted by the National Restaurant Association. This is in addition to regular course work in Culinary Arts and Hospitality I and II.

PROGRAM UNIQUENESS

Two areas in Family and Consumer Sciences Education have industry regulations. In both courses of study, compliance is recommended to meet public standards, therefore mitigating liability.

Culinary Arts and Hospitality

- The NC Department of Labor cites regulations on the use of equipment; and the NC Department of Environment, Health, and Natural Resources cites regulations regarding sanitation. These regulations assure the protection of public health. On an annual basis, food service establishments are inspected by county officials with the resulting sanitation grade posted. The establishments are issued grades of A, B, and C based on their compliance level.

Early Childhood Education

- The NC Department of Human Resources, Division of Child Development, Regulatory Services, cites regulations related to child care and safety. Child care licensure is obtained by submitting an application for a license, passing inspections, and providing written operational plans and records. Licenses are renewed annually. An "A" license is required for operation. A center may also obtain a national accreditation from the National Association for the Education of Young Children.

Further, in all on-the-job work opportunities, students are bound by the same regulations as other employees, such as those regarding health certificates or immunizations. The Fair Labor Standards Act including Child Labor Law Requirements and the NC Wage and Hour Act also apply.

COURSE OFFERINGS

Family and Consumer Sciences Education course offerings, grades 7-12, are the following:

Grades 7-8	Levels			
	Level 1	Level 2	Level 3	Level 4
Exploring Life Skills	Teen Living		Life Management	
	Foods and Nutrition		Culinary Arts and Hospitality I	Culinary Arts and Hospitality II
			Food Science	
	Interior Design and Housing		Interior Design Services I	Interior Design Services II
	Parenting and Child Development		Early Childhood Education I	Early Childhood Education II
	Clothing Design		Community and Family Services I	Community and Family Services II
			Human Services Work Development I	Human Services Work Development II
				Family and Consumer Sciences Adv. Studies

Family and Consumer Sciences Education
Course Descriptions

Clothing Design

Course Number: 7035
Maximum
Enrollment: 16
Recommended Hours of
Instruction: 135-180

This course includes basic skills in apparel selection, fashion design, and garment construction. Emphasis is on applying design and construction principles to select, design, and construct apparel and home fashions. Skills in mathematics, communication, and science are reinforced in this course. Work-based learning strategies appropriate for this course are field trips, job shadowing, and service learning. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite None

Community and Family Services I

Course Number: 7161
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 270-360

This course introduces students to human services careers providing access, information, and resources to individuals, families, and communities. Emphasis is placed on identifying needs, managing resources, and establishing relationships with clients. Skills in communication and resource management are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are service learning, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. Teen Living is a recommended prerequisite for this course.

Prerequisite None

Community and Family Services II

Course Number: 7162
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 270-360

This course prepares students for leadership in community support careers that provide for diverse human service roles. Topics include social systems, information management, and problem solving. Skills in communication, management, and entrepreneurship are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are service learning, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. Life Management is a recommended prerequisite for this course.

Prerequisite Community and Family Services I

Culinary Arts and Hospitality I

Course Number: 7121
Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course introduces students to basic food production, management, and service activities in both the back and the front of the "house." Emphasis is placed on sanitation, safety, and basic food preparation. Skills in mathematics, science, and communication are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are school-based enterprises, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. Foods and Nutrition is a recommeded prerequisite for this course.

Prerequisite: None

Culinary Arts and Hospitality II

Course Number: 7122
Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course provides advanced experiences in food production, management, and service. Topics include menu planning, business management, and guest relations. Skills in mathematics, communication, creative thinking, and entrepreneurship are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are school-based enterprises, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: Culinary Arts and Hospitality I

Early Childhood Education I

Course Number: 7111
Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course prepares students for careers working with young children birth through age 8. Emphasis is placed on enhancing the development of young children while providing care or teaching. Topics include health, safety, guidance, and developmentally appropriate activities. Skills in communication and interpersonal relationships are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are school-based enterprises, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. Parenting and Child Development is a recommended prerequisite for this course.

Prerequisite: None

Early Childhood Education II

Course Number: 7112
Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course prepares students for management careers and business ownership related to working with young children. Topics include curriculum development, record keeping, and personnel management. Skills in communication, management, and interpersonal relationships are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are school-based enterprises, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: Early Childhood Education I

Exploring Life Skills

Course Number: 7018
Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course explores life management skills essential to the work of the family. Topics include resource management, nutrition and wellness, personal and social responsibility, fashion and appearance, and career development. The focus is on developing a foundation for the application of life management skills. Skills in applying basic academic skills, problem solving, decision making, and creative and critical thinking are reinforced in this course. This course also contributes to the development of the career development plan. Work-based learning strategies appropriate for this course are field trips, job shadowing, and service learning. Life skills development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: None

Family and Consumer Sciences Advanced Studies

Course Number: 7199
Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This is a culminating course for seniors that is career-focused in the apparel design; community and family services: culinary arts and hospitality: early childhood education: food science, dietetics, and nutrition; or interior design career area. The three parts of the course include a research paper, a product, and a presentation. Students demonstrate their abilities to use content and apply knowledge to authentic situations in a selected career. In addition, they will also demonstrate their abilities to write, speak, solve problems, and use life skills such as time management and organization. Students work under the guidance of a teacher-facilitator in collaboration with community members, business representatives, and other school-based personnel. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: Three technical credits in apparel design, community and family services, culinary arts and hospitality, early childhood education, or interior design career area; or three technical and/or related non-required science credits in the food science, dietetics, and nutrition career area.

Foods and Nutrition

Course Number: 7045
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 135-180

This course examines nutritional needs of the individual. Emphasis is placed on the relationship of diet to health and on the selection of food to satisfy needs. Skills in science and mathematics are reinforced in this course. Work-based learning strategies appropriate for this course are field trips, job shadowing, and service learning. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite None

Food Science

Course Numbers: 7075
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 135-180

This course develops laboratory skills in the scientific evaluation of food, product development, and food preservation. Topics include the investigation of matter, electrolyte solutions, energy, properties, mixtures, and systems as they relate to food. Skills in science and mathematics are reinforced in this course. Work-based learning strategies appropriate for this course are field trips, job shadowing, and internships. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. Foods and Nutrition is a recommended prerequisite for this course.

Prerequisite None

Human Services Work Development I

Course Number: 7141
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 135-180
plus paid work
experience

This course combines classroom instruction with skilled on-the-job training in a student's chosen Family and Consumer Sciences career area. Students spend 50 percent of their course work in school-based learning and 50 percent in work-based learning. In the classroom, students follow the course blueprint for their career area: Community and Family Services I, Culinary Arts and Hospitality I, Early Childhood Education I, Food Science, or Interior Design Services I. While on the job, students focus on skills that cannot be attained in the classroom. Communication, teamwork, and employability skills are reinforced for all students in this course. Work-based learning strategies appropriate for course are internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. See the related career course description for the recommended prerequisite.

Prerequisite None

Human Services Work Development II

Course Number: 7142
Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180 plus paid work experience

This course continues the career preparation for providing services to individuals, families, and communities begun in Human Services Work Development I. It combines classroom instruction with skilled on-the-job training in a student's chosen Family and Consumer Sciences career area. Students spend 50 percent of their course work in school-based learning and 50 percent in work-based learning. In the classroom, students follow the course blueprint for their career area: Community and Family Services II, Culinary Arts and Hospitality II, Early Childhood Education II, Food Science, or Interior Design Services II. While on the job, students focus on skills that cannot be attained in the classroom. Entrepreneurship, leadership, and career planning skills are reinforced for all students in this course. Work-based learning strategies appropriate for this course are internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: Human Services Work Development I or as applicable - Community and Family Services I, Culinary Arts and Hospitality I, Early Childhood Education I, Food Science, or Interior Design Services I

Interior Design and Housing

Course Number: 7055
Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course examines housing and interiors decisions that individuals and families make based on their needs, the environment, and technology. Emphasis is placed on selecting goods and services and creating functional and pleasing living environments based on sound financial decisions and design principles. Skills in mathematics, technology, and art are reinforced in this course. Work-based learning strategies appropriate for this course are field trips, job shadowing, service learning, and school-based enterprises. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: None

Interior Design Services I

Course Number: 7151
Maximum Enrollment: 20
Recommended Hours of Instruction: 270-360

This course prepares students for opportunities in the residential and non-residential interior design fields for entry-level and technical jobs. Topics include application of design theory to interior plans and production, selection of materials, and examination of business procedures. Skills in technology, art, mathematics, and communication are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are field trips, job shadowing, school-based enterprises, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences. Interior Design and Housing is a recommended prerequisite for this course.

Prerequisite: None

Interior Design Services II

Course Number: 7152
Maximum Enrollment: 20
Recommended Hours of Instruction: 270-360

This course prepares students for opportunities in the residential and non-residential interior design fields professional jobs and entrepreneurial endeavors. Topics include advanced application of design theory to interior plans and production, selection of materials, customer relations, and entrepreneurship in a simulated business environment. Skills in technology, art, mathematics, and communication skills are reinforced in this course. Comprising 50 percent of the course work, work-based learning strategies appropriate for this course are field trips, job shadowing, school-based enterprises, internships, cooperative education, and apprenticeship. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: Interior Design Services I

Life Management

Course Number: 7085
Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed to empower students to take action for the well-being of themselves and others in the family, workplace, and community. Topics include resource management, personal development, parenting, relationships, career development, and wellness and nutrition. The focus is on what students need to know and be able to do to manage work and family responsibilities within the first five years after high school. Skills in decision making, problem solving, critical thinking, interpersonal relationships, technology, workplace readiness, and communication are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and service learning. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: None

Parenting and Child Development

Course Number: 7065
Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course introduces students to responsible nurturing and basic applications of child development theory. Emphasis is on the parents' responsibilities for and the influences on children while providing care and guidance. Skills in communication, resource management, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and service learning. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite: None

Teen Living

Course Number: 7015
Maximum
Enrollment: 26
Recommended Hours of
Instruction: 135-180

This course examines life management skills in nutrition and wellness, family living, child development, and consumer management. Emphasis is placed on students applying these skills during their teen years. Through simulated experiences, they learn to fulfill their responsibilities associated with the work of the family and community. Skills in mathematics, communication, science, technology, and personal and interpersonal relationships are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and service learning. Skill development and FHA/HERO leadership activities provide the opportunity to apply instructional competencies and workplace readiness skills to authentic experiences.

Prerequisite None

LOCAL COURSE OPTIONS

Schools may offer one or more specialized courses not included in the *Programs of Study.* These courses should meet a local economic need. Options may include:

Apparel Design Services

Refer to Part I, Local Course Options, and Appendix B for instructions on how to offer these courses.

FOR MORE INFORMATION

Family and Consumer Sciences Education
Workforce Development Education
Division of Instructional Services
NC Department of Public Instruction
301 North Wilmington Street
Raleigh, NC 27601-2825

HEALTH OCCUPATIONS EDUCATION

PROGRAM DESCRIPTION

The comprehensive Health Occupations Education program seeks to meet present and predicted needs for health care workers within a health care delivery system that is characterized by diversity and changing technologies. It is a program that recruits qualified and motivated students and prepares them for pursuit of appropriate health careers.

Design

Based on natural and social sciences, the humanities, and a researched body of knowledge, the curriculum is designed to offer a foundation of knowledge and skills necessary to health career preparation. Curriculum concepts incorporate technological advances related to the health care delivery system, including ethics, professionalism, prevention (wellness), patient/client diagnosis, treatment, care, and rehabilitation as a result of disease/disorders. Teaching/learning strategies integrate appropriate workplace basic skills that assist students to use resources and technologies, function as effective members within a complex system, and to access and use appropriate information/data.

Guiding students to make relevant connections between abstract theories and concrete applications is emphasized throughout the curriculum. This is especially practiced through team teaching with health professionals and on-site practicums (preceptorships/ internships).

Opportunities for expanded leadership, management, technical, and citizenship development are available through membership in a co-curricular student organization, Health Occupations Students of America (HOSA). The organization includes local, regional, state, and national levels. Activities integrate curriculum competencies and objectives. Healthy competition through organized and judged skill events assists in strengthening those skills that make students more marketable as potential health care workers. Interaction with health professionals also guides members in the selection of health careers. HOSA seeks to instill an attitude of pride, commitment, and professionalism in its members, and strives to build self-esteem and confidence.

MAJOR PROGRAM OUTCOMES

Health Occupations Education programs are designed to enable students to:

1. Select health career majors suited to their individual needs, aptitudes, abilities, and career development plan.

Continued on next page

2. Develop a sound preprofessional and pretechnical multiskilled foundation based on National Health Care Skill Standards.

3. Successfully pursue advanced education and/or entry-level employment in a health career major.

4. Develop workplace basic skills as applied to adapting to technological change, transferring of skills to different environments, and functioning as ethical and moral health team members.

5. Acquire and use information relevant to remaining technologically abreast of their choosen health career majors and the health field in general.

6. Develop a professional philosophy as evidenced in personal qualities and practices, that improves the delivery of quality health care and health maintenance to consumers.

7. Become knowledgeable consumers of health care in a consistently changing technological environment.

NATIONAL SKILL STANDARDS

Through a United States Department of Education federal grant managed by Far West Laboratory on Research and Development and in partnership with the National Consortium on Health Science and Technology Education (NCHSTE), voluntary National Health Care Skill Standards have been validated. There are 31 core standards configured into six subsets that address what health care workers need to know and be able to do. Research conducted by North Carolina State University (1995-1996) has provided significant evidence that the secondary Health Occupations Education body of knowledge has integrated each of the standards. VoCATS provides a valid and reliable student assessment.

STUDENT CREDENTIALING AND CERTIFICATION

Cardiopulmonary Resuscitation (CPR) and Basic First Aid Certification

- Students who successfully complete Allied Health Sciences I and II may acquire American Red Cross or American Heart Association CPR and Basic First Aid Certification.

Standard Precautions Proficiency Certification

- The Occupational Safety and Health Act (OSHA) requires all health care workers who may come in contact with body fluids must demonstrate proficiency in tasks/procedures referred to as "Standard Precautions." Students must demonstrate such

Continued on next page

proficiency prior to their Health Occupations Education clinical internships or mentorships. Evaluation and certification may be given by either local health agency personnel or by a licensed secondary Health Occupations Education teacher.

Nurse Aide, Level I Certification

- A student may acquire Nurse Aide Level I certification if the student:

1. Successfully completes selected core competencies in Allied Health Sciences I and II and supplemental competencies identified in the state approved Nurse Aide, Level I curriculum.

2. Is taught by a state approved teacher (Registered Nurse) in a state approved program.

3. Scores at least 85 percent on a written examination and 100 percent on a performance assessment within a health care agency.

Students' names and demographic data are entered into the North Carolina Nurse Aide Central Nurse Registry that is electronically accessible statewide to potential employers.

DAMON Medical Terminology Certification

- Students who successfully complete the DAMON Medical Terminology course may receive certification awarded by the local Health Occupations Education program and an approved teacher. The DAMON system is recognized by health agencies and by postsecondary Health Occupations Education programs.

PROGRAM UNIQUENESS

Work-based experiences include an individualized approach with either a minimum of 90 hours in a clinical internship in health agencies, or a minimum of a 45-hour mentorship with a health care professional. Medical liability insurance for negligent acts in health agencies and Hepatitis Type B virus vaccinations are afforded to students prior to clinical experiences. Health agencies may require testing for tuberculosis and a criminal record check for felonies related to drugs.

COURSE OFFERINGS

Health Occupations Education course offerings, grades 9-12, are the following:

Levels			
Level 1	Level 2	Level 3	Level 4
Biomedical Technology Health Team Relations	Allied Health Sciences I Medical Sciences I	Allied Health Sciences II Medical Sciences II	Health Sciences Adv. Studies

NOTE: The sequencing of Health Occupations Education courses should result in having seniors only in Allied Health Sciences II and Medical Sciences II. This is a criterion for acquiring medical liability insurance.

Health Occupations Education Course Descriptions

Allied Health Sciences I

Course Number: 7211
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course investigates the health care delivery system, its services, occupations, and related sciences. Topics include the study of the language of medicine, medical mathematics, microbiology, anatomy and physiology, diseases/disorders, diagnoses, treatments, patient/client care regimens, career development, and future technological innovations. Work-based learning strategies include service learning, field trips, and job shadowing. Skills in science, mathematics, communications, social studies and health are reinforced in this course. Projects, teamwork, demonstrations, and HOSA competitive events serve as instructional strategies that reinforce the curriculum content.

Prerequisites: Biology and Health Education

Allied Health Sciences II

Course Number: 7212
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course is designed to prepare potential health care workers, preferably seniors, to become effective and efficient multiskilled health team members. Emphasis is placed on the development of proficiency in employability skills, emergency care skills, safety skills, clerical skills, and health care skills. The work-based learning strategy appropriate for this course is a minimum 90-hour clinical internship where student interns deliver health care in local hospitals, medical/dental/veterinarian offices, nursing/convalescent/retirement facilities, wellness centers, etc. Skills in science, mathematics, communications, health, and social studies are reinforced in this course. HOSA activities support networking with health care agencies and professionals through the development of clinical expertise and volunteerism.

Prerequisites: Allied Health Sciences I or Medical Sciences I

Biomedical Technology

Course Number: 7200
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This survey course challenges students to investigate current and 21st century medical and health care practices using computerized databases, the Internet, media, and visiting health team professionals. Topics include the world of biomedical technology, the language of medicine, present and evolving biomedical specialties, biomedical ethics: crises and alternatives, and health career development. Work-based learning strategies include service learning, field trips, and job shadowing. Skills in science, mathematics, communications, health, and social studies are reinforced in this course. HOSA membership provides opportunities for personal and experiential growth.

Prerequisite: None

Health Science Advanced Studies

Course Number: 7299
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This is a culminating course for seniors that is career-focused in a health or medical career. The three parts of the course include a research paper, a product, and a presentation. Students demonstrate their abilities to use content and apply knowledge to real-world situations in a selected career. In addition, they will also demonstrate their abilities to write, speak, apply knowledge, problem solve, and use life skills such as time management and organization. Students work under the guidance of a teacher-facilitator in collaboration with community members, business representatives, and other school-based personnel.

Prerequisites: Three credits in Health Occupations Education

Health Team Relations

Course Number: 7210
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course is designed to assist potential health care workers in their role and function as health team members. Topics include terminology, the history of health care, health care agencies, ethics, legal responsibilities, careers, holistic health, human needs, change, cultural awareness, communication, medical math, leadership, and career decision-making. Work-based learning strategies include service learning, field trips, and job shadowing. Basic academic skills, employability skills, critical thinking skills, teamwork, and the use of technology are reinforced in this course. HOSA leadership activities provide many opportunities for practical application of instructional competencies.

Prerequisite: None

Medical Sciences I

Course Number: 7221
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course uses advanced investigative approaches to the study of human and social sciences as related to medicine and health care. Emphasis includes patient/client psychology, bioethical/legal practices, the language of medicine, body chemistry, microbiology, anatomy and physiology, and the current and futuristic study of diseases and disorders. Work-based learning strategies include service learning, field trips, and job shadowing. Skills in science, mathematics, communications, health, and social studies are reinforced in this course. HOSA competitive events serve as instructional strategies that reinforce the curriculum content.

Prerequisites: Biology, Algebra I, Health Education

Medical Sciences II

This specialized course is designed to prepare potential health care workers, preferably seniors, for performance in an advanced technical or professional health career. Emphasis is placed on research, communications, safety, computer literacy, health team relations,

Continued on next page

Course Number: 7222
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

problem-solving and decision-making. Skills in mathematics, science, communications are reinforced in this course. Work-based learning strategies include the development of individualized clinical skills specifically related to a selected mentorship (minimum of 45 hours) with an exemplary health professional. HOSA activities support networking with health care agencies and professionals through the development of clinical expertise and volunteerism.

Prerequisites: Allied Health Sciences I or Medical Sciences I

FOR MORE INFORMATION

Health Occupations Education
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 North Wilmington Street
Raleigh, North Carolina 27601-2825

MARKETING EDUCATION

PROGRAM DESCRIPTION

The purpose of the Marketing Education instructional program is to prepare students for advancement in marketing and management careers and/or future studies in two-year technical/community colleges or four-year colleges or universities. Marketing is a vast and diverse discipline. It encompasses activities within production, as well as aspects of consumption. It is as specific as procedures for inventory control and, at the same time, as general as the creativity needed in effective promotion. The function of marketing occurs in all industries. Application of skills in reading, writing, mathematics, problem-solving, and critical thinking are found throughout the curriculum.

Based upon the National Curriculum Framework and National Skill Standards, courses in Marketing Education provide students with essential skills necessary to succeed in the workplace. The basic skills of reading, writing, and mathematics are an integral part of the Marketing Education curriculum. Skills in academic and technical areas are combined with the use of technology to provide students the foundation our business and industry leaders demand. Emphasis is placed on the development of competence in marketing functions and foundations, economic foundations and human resource foundations, to create a well-rounded education, therefore enabling students to pursue further education in their chosen marketing career.

DESIGN

The high school scope and sequence of Marketing Education includes varied program offerings for students in grades 9-12 (levels 1-4). Students may enter the program and progress through the Business Technologies Career Pathway in one of six career majors:

- Marketing Technologies
- Sales & Technical Services
- Travel, Tourism, and Recreation Marketing
- Business Management and Small Business/Entrepreneurship
- Fashion Merchandising
- Business Administration

Work-based learning strategies should be practiced throughout the Marketing Education curriculum.

Opportunities to develop and apply leadership, social, civic, and vocational/technical skills in marketing are provided through DECA, an association for Marketing Education students. As an integral part of the instructional program, students engage in performance activities to demonstrate their mastery of knowledge to business and industry leaders. These organized activities help to interpret the Marketing Education program to the business community, faculty, parents, and other students.

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MAJOR PROGRAM OUTCOMES

Marketing programs in the secondary schools are designed to enable students to:

1. Make realistic career choices regarding marketing careers.
2. Prepare for further education in the discipline of marketing.
3. Develop occupational and entrepreneurial skills necessary for initial employment and advancement in a marketing career.
4. Develop an understanding and appreciation of the social, civic, and economic values of the production, marketing, and consumption of goods and services.
5. Participate in work-based learning activities which allow skill application in a marketing related field.
6. Develop initiative and leadership skills.
7. Develop and apply communication, computational, problem-solving, critical thinking, and planning competencies that will enable them to pursue further education and/or advance more rapidly in a chosen marketing career.

NATIONAL VOLUNTARY SKILL STANDARDS

National Skill Standards for the Hospitality and Tourism Industry

Through the Council of Hotel, Restaurant, and Institutional Education (CHRIE), in conjunction with the National Skill Standards Project, voluntary skill standards for the hospitality and tourism industry have been developed. Food, lodging, travel-related, and recreational services are addressed in these standards. These standards are addressed in the Travel, Tourism, and Recreation Marketing curriculum.

National Retail Skill Standards

The National Retail Federation (NRF) developed skill standards for the retail sales associate to promote a high performance work organization at the point where the greatest number of jobs and the opportunity for driving profit co-exist. These standards are addressed in the Marketing, Marketing Management, and the Fashion Merchandising curricula through personal selling competencies.

National Voluntary Curriculum Standards

The North Carolina Marketing Curriculum is based on the National Marketing Education Curriculum Framework. This framework was

Continued on next page

developed through a joint effort of the U. S. Department of Education, the Marketing Resource Center, business and industry leaders, and marketing educators across the nation.

The Curriculum Framework is divided into three foundational areas and nine marketing functions. The three foundations support the nine marketing functions.

The three broad instructional areas include:

- Economic Foundations of Marketing
- Human Resource Foundations
- Marketing and Business Foundations

The nine specific functions recognized in the curriculum framework include competencies ranging from the career-sustaining level to manager-entrepreneur. The nine functional areas of marketing are:

- Distribution
- Financing
- Marketing-Information Management
- Pricing
- Product/Service Planning
- Promotion
- Purchasing
- Risk Management
- Selling

COURSE OFFERINGS

Marketing Education course offerings, grades 7-12, are as follows:

Grades 7-8	Levels			
	Level 1	Level 2	Level 3	Level 4
Exploring Business & Marketing Education	Principles of Business	Marketing Fashion Merchandising	Travel, Tourism, and Recreation Marketing Small Business/ Entrepreneurship Marketing Management Strategic Marketing Business and Financial Management I	Marketing Technology and Media Business and Financial Management II Marketing Advanced Studies

Course Descriptions for Marketing Education

Business and Financial Management I

Course Number: 6641
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed as a study of financial and management concepts in a business environment. Topics of study include financial institutions/services, financial planning, consumer rights and responsibilities, credit, investing, and management. Mathematics, economics, and communication skills are reinforced as the students gain a better understanding of individual responsibilities to self, to society, and to personnel with whom they will work. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

See page 42 for prerequisites.

Business and Financial Management II

Course Number: 6642
Recommended Maximum Enrollment: 26
Recommended Hours of Instruction: 135-180

This course is designed as an advanced study of management concepts for personnel and finances in business. Topics of study include stocks, bonds, annuities, mutual funds, pensions, employment benefits, labor laws, tax laws, business forecasting, and management. Mathematical, economics and communication skills are reinforced as the students gain a better understanding of business responsibilities to stockholders and personnel with whom they work. Work-based learning strategies appropriate to this course are school-based enterprises, internships, cooperative education, and apprenticeship. Simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Business and Financial Management I

Exploring Business and Marketing

Course Number: 6208
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course is designed to explore the nature of business in an international economy and to study related careers in fields such as financial services, fashion merchandising, information systems, marketing, office systems technology, public relations and promotion, and travel and tourism. Emphasis is on using the computer while studying applications in these careers along with problem solving and thinking skills. Communication and mathematical skills are reinforced as students explore business applications and careers. Work-based learning strategies appropriate for this course are service learning, field trips, and job shadowing. Simulations, projects, teamwork, and CECNC leadership activities, meetings, conferences, and competitions provide

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opportunities for application of instructional competencies. This course contributes to the development of a career development plan.

Recommended Prerequisite

Keyboarding Skill – defined as minimum of 35 words per minute with errors corrected; format from rough draft copy of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Fashion Merchandising

Course Number: 6631
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course is designed for students interested in the fashion industry and the merchandising of fashion. Topics include an overview of the fashion industry, evolution and movement of fashion, career development, merchandising, risk management, promotion, and fashion show production. Skills in research, mathematics, textile chemistry, and technical writing are reinforced in this course. Work-based learning strategies appropriate for this course include cooperative education or paid/unpaid internships. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

Prerequisite

None

Marketing

Course Number: 6621
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course is designed to help students develop basic knowledge, skills, and attitudes that will prepare them to enter the field of marketing. Focusing on the National Curriculum Framework and National Retail Standards, an emphasis is placed on marketing and business foundations, economic foundations, and human resource foundations. Included in these foundations are concepts such as communications, selling, pricing, promotion, marketing-information management, and product/service planning. Skills in communications, mathematics, and psychology are reinforced in this course. Work-based learning strategies appropriate for this course include job shadowing, field trips, and/or cooperative education. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

Prerequisite

None

Marketing Technology and Media

This course is designed to couple the marketing and economic skills students have mastered with the latest technology in marketing sales, mass media, research, and customer service presentation techniques. Emphasis is placed on creating a professional, polished approach to marketing products and services. Skills in technical writing,

Continued on next page

Course Number: 6665
Recommended
Maximum
Enrollment: 16
Recommended Hours of
Instruction: 135-180

communications, mathematics, and application of current computer software are reinforced in this course. Work-based learning strategies appropriate for this course include paid/unpaid internships and apprenticeships. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

Prerequisite

Marketing, Fashion Merchandising or Strategic Marketing, and Computer Applications I.

Marketing Management

Course Number: 6622
Recommended
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 135-180

This course is designed to continue the foundations covered in Marketing or Fashion Merchandising. Topics of study include recruiting, hiring, training and evaluating employees; information management; purchasing; pricing; ethics; sales management; and financing. Skills in math, human relations, communications, and technical writing are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education, paid/unpaid internships, and apprenticeships. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

Prerequisites

Marketing or Fashion Merchandising

Marketing Advanced Studies

Course Number: 6699
Recommended
Maximum
Enrollment: 16
Recommended Hours of
Instruction: 135-180

This course is a three-phased culminating exit course for seniors that is career-focused. The three components of the program include writing a research paper, producing a product, and delivering a presentation. Students demonstrate their ability to use content and apply knowledge to real-world situations in a career major. In addition, they will also demonstrate their ability to write, speak, apply knowledge, problem solve, and use life skills such as time management, planning, follow through, and organization. Students work under the guidance of a teacher facilitator in collaboration with community members, business representatives, and other school-based personnel. Simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisites

Three Marketing or Business credits in a Business Technologies career major.

Principles of Business

This course is an introductory course covering principles and concepts that will be the foundation for future study of business and management of work projects. Topics of study include basic business principles, management concepts, systems thinking and total quality, and the

Continued on next page

Course Number: 6600
Recommended
Maximum
Enrollment: 26
Recommended Hours of
Instruction 135-180

current environment for business in an international marketplace. Communication skills and basic mathematic concepts are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and job shadowing. Simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

Prerequisite

Keyboarding Skill – defined as a minimum of 35 words per minute with errors corrected; format from rough draft of an announcement, memorandum, personal business letter, and unbound report; and exhibit proper keyboarding techniques.

Small Business/ Entrepreneurship

Course Number: 6615
Recommended
Maximum
Enrollment: 20
Recommended Hours of
Instruction: 135-180

This course is designed to introduce students to the rewards and risks of owning or operating a business enterprise. Emphasis is placed on the mastery of skills needed to plan, organize, manage, and finance a small business. Skills in communication, technical writing, mathematics, research, and problem-solving are reinforced as each student prepares his/her own business plan. Work-based learning strategies appropriate for this course include cooperative education and paid/unpaid internships. Simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide opportunities for application of instructional competencies.

None

Strategic Marketing

Course Number: 6626
Recommended
Maximum
Enrollment: 20
Recommended Hours
of Instruction: 135-180

This fast-paced course challenges students by combining in one year the content taught in both the Marketing and Marketing Management course. The curriculum, activities and resources utilized in this course are written at the freshman college level. Topics include economics, marketing research and decision making, domestic and international markets and influences, human resource development, ethics, management, and financial analysis. Skills in mathematics, research and critical thinking are reinforced in this course. Work-based learning strategies appropriate for this course include cooperative education and paid/unpaid internships. Marketing simulations, projects, teamwork, and DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

Prerequisite

None

Travel, Tourism, and Recreation Marketing

This course is designed to provide a foundation for students interested in a career in travel, tourism, and recreation marketing. Emphasis is placed on the hospitality/tourism industry, customer relations, travel destinations, tourism promotion, economics, and career development.

Course Number: 6645
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

Skills in mathematics, psychology, geography, and communications are reinforced in this course. Work-based learning strategies appropriate for this course include cooperative education or paid/unpaid internships. Marketing simulations, projects, teamwork, DECA leadership activities, meetings, conferences, and competitions provide many opportunities for application of instructional competencies.

Prerequisite Marketing

LOCAL COURSE OPTIONS

Schools may offer one or more specialized courses not included in the *Programs of Study*. These courses should meet a local economic need. Options may include:

Advertising and Sales Promotion
Fashion Merchandising and Management
International Marketing
Sales Fundamentals

Refer to Part I, Local Course Options, and Appendix B for instructions on how to offer these courses.

FOR MORE INFORMATION

Marketing Education
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 North Wilmington Street
Raleigh, North Carolina 27601-2825

TECHNOLOGY EDUCATION

PROGRAM DESCRIPTION

Technology Education is designed to help students develop an appreciation and understanding of technology through the study and application of materials, tools, and processes of the past and present. This series of courses allows students to apply knowledge, tools, skills, and insights to the solving of problems found in communication, manufacturing, structural, and transportation systems. Students learn about and from technology, by applying abstract ideas and concepts of mathematics, science, language arts, and social studies. Through this integrated study of technology, students develop an understanding of the importance and role of technology in our society.

Design

Communication skills and problem solving are major focuses of the prerequisite course, Fundamentals of Technology. Emphasis is placed on skills and tools central to technology studies and the systems courses, including interpreting technical communication, problem-solving, modeling, safety, testing instrumentation, and technology assessment necessary for understanding contemporary technologies. The systems courses follow a similar course structure, while developing in-depth skills in the specific areas of communication, manufacturing, structural, and transportation systems. This systematic approach to learning about technology prepares students for the rapidly changing technological world by developing skills necessary for adapting to new technologies as they evolve.

The Technology Student Association (TSA) is also an essential component of Technology Education. Through TSA, students learn and apply technical, leadership, social, and civic skills. Students become effective team members through the use and development of interpersonal skills. TSA activities are an integral part of the Technology Education program and relate directly to the program outcomes.

MAJOR PROGRAM OUTCOMES

Programs in Technology Education are designed to help students:

1. Acquire general technological literacy.
2. Access, process, and share information through the use of contemporary tools and processes.
3. Acquire and apply design, problem solving, and leadership skills.
4. Assess the implications of technology upon society, the economy, and the environment.
5. Appreciate the importance of technology and its effect on all aspects of human behavior and systems.

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6. Use simple and complex tools and concepts found in communication, manufacturing, structural, and transportation systems.
7. Apply physical and social sciences, mathematics, and language and fine arts concepts and principles in an authentic manner.
8. Make wise career decisions.
9. Become more knowledgeable citizens and consumers regarding issues of technology.
10. Become responsible, participating, and successful citizens.

NATIONAL VOLUNTARY CURRICULUM STANDARDS

The Technology Education curriculum standards were initiated by the International Technology Education Association (ITEA) and funded by the National Science Foundation (NSF) and the National Aeronautics and Space Administration (NASA). The project, *Technology for All Americans*, has created a rationale, structure, and framework for Technology Education K-12. These standards identify what all students should know and be able to do with respect to understanding technology.

PROGRAM UNIQUENESS

Technology Education develops an understanding of complex technologies through the systems approach to problem solving. Student participate in designing, developing, monitoring, assessing, correcting, and improving technological systems.

Technology Education provides a foundation for students to make career decisions leading to other workforce development education courses of study.

Principles of Technology (PT) courses are recognized as science and/or mathematics courses under the following conditions:

1. PT I or II can be used as a science credit for high school graduation.
2. The NC University system recognizes PT I and II as a science credit for university admission.
3. Many community colleges provide postsecondary physics and/or mathematics credits for completion of PT I and II.

COURSE OFFERINGS

Technology Education Course Offerings, Grades 7-12, are the following:

Grades	Levels			
7-8	Level 1	Level 2	Level 3	Level 4
Exploring Technology Systems	Fundamentals of Technology	Communication Systems		Technology Studies
		Manufacturing Systems		
		Structural Systems		
		Transportation Systems		
		Principles of Technology I	Principles of Technology II	

Course Descriptions for Technology Education

Communication Systems

Course Number: 8125
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces students to classical and contemporary visual and audio design, using state-of-the-art technology. Emphasis is placed on design, sketching, computer networking and operating systems, the Internet, electronic and optical communication systems, and concentrated areas of study determined by students and their teacher. Activities are structured to integrate physical and social sciences, mathematics, language and fine arts, and technical studies. Work-based learning strategies appropriate for this course include school-based enterprise, job shadowing, and service learning projects. This course and TSA technical and leadership activities develop skills essential for students interested in pursuing technical or engineering careers in communication related fields.

Prerequisite: Fundamentals of Technology

Exploring Technology Systems

Course Number: 8108
Recommended Maximum Enrollment: 18
Recommended Hours of Instruction: 67-90

This course is designed to allow students to explore basic technological concepts and related career fields. Topics include technology systems, technical drawing, graphic design, modeling skills, computer systems, electronics, and audio/visual production. Activities are structured to integrate physical and social sciences, mathematics, and language and fine arts. This course contributes to the development of a career development plan. Work-based learning strategies appropriate for this course include job shadowing and field trips. This course and TSA technical and leadership activities enhance the students' appreciation of technical and engineering career fields.

Prerequisite: None

Fundamentals of Technology

Course Number: 8110
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides hands-on experiences in principles and processes essential for the technology systems courses and develops a foundation for students interested in any technical field of study. Emphasis is placed on problem solving, design, technical communication, modeling, testing, evaluation, and implications of technology. Activities are structured to integrate physical and social sciences, mathematics, and language and fine arts. Work-based learning strategies appropriate for this course include job shadowing and field trips. This course and TSA technical and leadership activities develop skills essential for students interested in technical or engineering career fields.

Prerequisite: None

Manufacturing Systems

Course Number: 8115
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces students to principles of past and present manufacturing systems. Emphasis is placed on students designing, producing, and evaluating products using contemporary manufacturing methods. Activities are structured to integrate physical and social sciences, mathematics, and language and fine arts. Work-based learning strategies appropriate for this course include school-based enterprise, job shadowing, and service-learning projects. This course and TSA technical and leadership activities develop skills essential for students interested in pursuing careers in manufacturing as a designer, drafter, industrial manager, technician, or engineer.

Prerequisite
Fundamentals of Technology

Principles of Technology I

Course Number: 8011
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course provides a hands-on approach to understanding principles and concepts of technology and associated mathematics. Emphasis is placed on understanding mechanical, electrical, fluid, and thermal systems as they relate to work, force, rate, resistance, energy, and power. Activities are structured to integrate science, mathematics, and language arts. Work-based learning strategies appropriate for this course include job shadowing and field trips. This course and TSA technical and leadership activities enhance the skills of students interested in pursuing technical, engineering, or science related careers. Algebra I and Fundamentals of Technology are recommended prerequisites.

Prerequisite
None

Principles of Technology II

Course Number: 8012
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course is designed as a continuation of level I. Emphasis is placed on understanding mechanical, electrical, fluid, and thermal systems as they relate to force transformers, momentum, waves and vibrations, energy convertors, transducers, radiation theory, optical systems, and time constants. Activities are structured to integrate science, mathematics, and language arts. Work-based learning strategies appropriate for this course include job shadowing, and field trips. This course and TSA activities further enhance the skills essential for success in technical, engineering, and science related fields.

Prerequisite
Principles of Technology I

Structural Systems

Course Number: 8141
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course is designed to introduce students to classical and contemporary elements, principles, and processes of structural systems. Architectural and engineering subjects are studied through research, design, project development, and assessment. Activities are structured to integrate physical and social sciences, mathematics, and language and fine arts. Work-based learning strategies appropriate for this course include school-based enterprise, job shadowing, and service-learning

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projects. This course and TSA technical and leadership activities develop skills essential for students interested in pursuing careers in building trades, city planning, architecture, or civil engineering.

Prerequisite Fundamentals of Technology

Technology Studies

Course Number: 8005
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course allows students to pursue a topic of interest using knowledge and skills gained from previous workforce development and academic courses. Emphasis is placed on student-directed study and evaluation of a technological concept or application of technological tools. The assessment is structured to assure student identification of integrated science, mathematics, and language arts objectives. This course can be used for Technology Education career studies for students who have completed three technical credits in a career major. Work-based learning strategies appropriate for this course include school-based enterprise, job shadowing, service-learning projects, apprenticeship, cooperative education, and internship. This course and TSA technical and leadership activities allow students to pursue in-depth research and experimentation within technical and engineering fields.

Prerequisite Fundamentals of Technology

Transportation Systems

Course Number: 8126
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course is designed to introduce students to land, water, air, and space transportation through experimentation and model making. Emphasis is placed on defining problems, designing, constructing, and testing prototypes. Activities are structured to integrate the physical sciences and mathematics. Work-based learning strategies appropriate for this course include school-based enterprise, job shadowing, and service-learning projects. This course and TSA technical and leadership activities develop skills essential for students interested in technical or engineering careers in transportation related fields.

Prerequisite Fundamentals of Technology

FOR MORE INFORMATION

Technology Education
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 North Wilmington Street
Raleigh, North Carolina 27601-2825

TRADE AND INDUSTRIAL EDUCATION

PROGRAM DESCRIPTION

Trade and Industrial Education is a secondary program designed to prepare students for careers in public service, industry, and the trade occupations through a sequence of learning experiences. Instructional units are provided in the use of layout, design, production, processes, assembly, quality control, maintenance, and service of industrial, commercial, and residential goods and products.

Design

As a component of workforce development education, Trade and Industrial Education provides students the opportunity to advance in a wide range of trade and industrial occupations by preparing them for initial employment, further education at the community college or university level, and/or business ownership. The major industrial areas are construction, manufacturing, transportation, communication, and public services. A balanced program of classroom study and practical work experiences produces competent workers who can manage resources, work cooperatively, organize and use information, understand complex systems, and apply appropriate technology. Cooperative education, internship, and apprenticeship experiences are available through the Trade and Industrial Education program.

Opportunities to develop and apply interpersonal leadership, social, civic, and business-related skills are provided through Vocational Industrial Clubs of America (VICA), the vocational student organization for Trade and Industrial Education students. As an integral part of the Trade and Industrial Education program, VICA activities enhance classroom instruction through leadership and teamwork activities. These activities directly relate to the major objectives of Trade and Industrial Education.

MAJOR PROGRAM OUTCOMES

The major outcomes for Trade and Industrial Education are to

- Develop basic manipulative and technological skills relative to industrial occupations through a combination of laboratory experiences and on-the-job training experiences.
- Provide technical information (principles and theory) with emphasis on the application of communications, mathematics, design, economics, science, and computer skills pertinent to employment and success in an industrial occupation.
- Provide instruction in such areas as human relations, safety and health, positive work habits, and employability skills.

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- Develop the skills needed to exercise and follow effective leadership in fulfilling occupational, social, and civic responsibilities.

NATIONAL VOLUNTARY SKILL STANDARDS

The United States Departments of Education and Labor have initiated public-private partnerships to develop voluntary skill standards for various industries. Skills and performance levels needed by the American workforce to be competitive have been identified.

The seven National Voluntary Occupational Skill Standards used as guides in Trade & Industrial Education follow.

National Automotive and Technicians Education Foundations Inc. (NATEF) sets skills for the automotive and auto body courses. These national skills are in Automotive Technology I, II, & III and Collision Repair Technology II & III.

The Foundation for Industrial Modernization (FIM) sets skill standards for Computer Aided Drafting and Design (CADD) users. These national skill standards are used in Drafting I, Drafting - Architectural II & III, and Drafting - Engineering II & III.

The Electronic Industries Foundation (EIF) sets skills standards for the electronics industries. These national skill standards are used in Electronics I, II, & III.

The **Metalworking Industry Skill Standards Board** sets skill standards for the metalworking industry. These national skill standards are used in Metals Manufacturing Technology I, II, & III.

The **Graphic Arts Technical Foundation** (GRATF) sets skills for the printing industry. These national skill standards are used in Printing Graphics I, II, & III.

The **American Welding Society** (AWS) sets skills for the welding trades. These national skill standards are used in Welding Technology I, II, & III.

The **National Electrical Contractors Association** (NECA) sets skill standards for the electrical industry. These national skill standards are used in Electrical Trades I, II, & III.

National Voluntary Curriculum Standards for Construction Technology

The National Center for Construction Education and Research has created and disseminated construction training programs nationwide. This effort unites construction into one industry under one training program.

The curriculum developed by the center provides standardized training across the country. Certified instructors, teaching in accredited training centers and schools, give students the skills they need to begin rewarding professional careers. Workers trained under this program have portable skills to move from one company to another and from one region of the country to another.

A National Registry operated by the National Center for Construction Education and Research exists to certify skills and help students, employees and employers. The transcript provides an accurate account of a potential employee's skill level and is accepted throughout the country.

STUDENT CREDENTIALING AND CERTIFICATION

Four industries offer national credentialing, certification, documentation and registry services to accredit high school Trade and Industrial Education programs. Each has rigid inspection, testing, and acceptance criteria and maintains a national registry that provides portable credentials. These agencies are the American Welding Society (AWS), National Automotive Technicians Education Foundation (Automotive Service Excellence, ASE), the National Center for Construction Education and Research (NCCER), and the National Institute for Metalworking Skills (NIMS).

North Carolina also requires certain trades, crafts, and technicians to be licensed. Licensure usually requires meeting age, education, experience, and examination criteria. Most Trade and Industrial Education programs provide the skills and knowledge appropriate to attaining licensure.

The North Carolina Department of Labor offers Registered Apprenticeship programs leading to the designation of journeyperson in all trades and crafts offered by Trade and Industrial Education. They also maintain a registry and portable credential.

The following chart illustrates credentialing and certification offerings for the five major Trade and Industrial Education clusters.

CERTIFYING AGENCIES

HIGH SCHOOL PROGRAM	AWS	ASE	NIMS	NCCER	L	A
COMMUNICATIONS						
Drafting						•
Printing Graphics						•
CONSTRUCTION						
Construction Technology				•	•	•
Cabinetmaking						•
Electrical Trades				•	•	•
Masonry				•		•
MANUFACTURING						
Electronics						•
Electro-Mechanical Technology						•
Metals Manufacturing Technology			•			•
Textile Technology						•
Welding Technology	•			•	•	•
PUBLIC SERVICE						
Cosmetology					•	•
TRANSPORTATION						
Automotive Service Technology		•				•
Collision Repair Technology		•				•

KEY	CERTIFYING AGENCIES
AWS	American Welding Society
ASE	Automotive Service Excellence, National Automotive Technicians Education Foundation
NIMS	National Institute for Metalworking Skills
NCCER	National Center for Construction Education and Research
L	Licensure, State
A	Apprenticeship, Department of Labor

PROGRAM UNIQUENESS

- The scope and sequence of Trade and Industrial Education includes program offerings in 14 distinct technologies.

- The Construction Technology curriculum is guided and supported by the North Carolina Construction Education Alliance, which standardizes education and training for public schools, community colleges, registered apprenticeship programs, college and university programs, and construction industry training and education programs.

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- **The majority of the apprenticeable occupations listed by the Department of Labor are related to technical skills contained in Trade and Industrial Education courses.**

COURSE OFFERINGS

Trade and Industrial Education course offerings, grades 9-12, are the following:

Levels			
Level 1	Level 2	Level 3	Level 4
Introduction to Trade and Industrial Education		Trade & Industrial Work Development I	Trade & Industrial Work Development II
	Communications		
	Drafting I	Drafting - Architectural II	Drafting - Architectural III
		Drafting - Engineering II	Drafting - Engineering III
	Printing Graphics I	Printing Graphics II	Printing Graphics III
	Scientific and Technical Visualization I	Scientific and Technical Visualization II	
	Construction		
	Construction Technology I	Construction Technology II	Construction Technology III
		Cabinetmaking II	Cabinetmaking III
	Electrical Trades I	Electrical Trades II	Electrical Trades III
	Masonry I	Masonry II	Masonry III
	Manufacturing		
	Electro-Mechanical Technology I	Electro-Mechanical Technology II	Electro-Mechanical Technology III
	Electronics I	Electronics II	Electronics III
	Metals Manufacturing Technology I	Metals Manufacturing Technology II	Metals Manufacturing Technology III
	Textile Technology I	Textile Technology II	Textile Technology III
	Welding Technology I	Welding Technology II	Welding Technology III
	Public Service	Cosmetology I	Cosmetology II
	Transportation		
	Automotive Service Technology I	Automotive Service Technology II	Automotive Service Technology III
		Collision Repair Technology II	Collision Repair Technology III
			Trade and Industrial Education Advanced Studies

Trade and Industrial Education Course Descriptions

Automotive Service Technology I

Course Number: 7511
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces basic automotive skills and job opportunities in the auto repair industry. Topics include engine theory, automotive service preventive maintenance, brake repair, electrical systems trouble shooting, safety, test equipment, and measuring. Automotive Service Technology I is used as a prerequisite for Automotive Service Technology II and Collision Repair Technology II. Skills in science, mathematics, thinking, and leadership are reinforced in this course. Work-based learning strategies for this course should include field trips, internships, job shadowing, and cooperative on-the-job training. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Completed or enrolled in Algebra I

Automotive Service Technology II

Course Number: 7512
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course emphasizes the advanced skills necessary in the automotive industry. Specific instructions are given in troubleshooting, automotive preventive maintenance, minor engine repair, engine performance, and brakes. Reading, math, science, and principles of technology are reinforced in this course. The level II course helps prepare students for Automotive Service Excellence (ASE) technician certification. Work-based learning experience strategies appropriate for this course are field trips, job shadowing, internships, cooperative on-the-job- training, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Automotive Service Technology I

Automotive Service Technology III

Course Number: 7513
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This advanced course in auto repair puts emphasis on the practical application of skills and techniques necessary in the automotive industry. Specific instruction is given in engine performance, drive-ability, ignition, and fuel system diagnosis/repair, emission control systems, antilock brakes, electrical diagnosis, steering and suspension. This course further prepares students for Automotive Service Excellence (ASE) certification and further education. Skills in leadership, safety, problem solving, and planning are reinforced in this course. The work-based learning strategies appropriate for this course are cooperative on-the-job training, internships, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Automotive Service Technology II

Cabinetmaking II

Course Number: 7622
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course introduces career information, employment opportunities, and skills required for work in the cabinetmaking industry. Topics include tools and equipment, theory and practice, types of woods, finishes, styles, bonds and fasteners. Skills in mathematics, reading, leadership, safety, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisites

Construction Technology I

Cabinetmaking III

Course Number: 7623
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers development of more advanced knowledge and skills in the cabinet industry. Emphasis is placed on construction principles as applied to mass production, and the construction and installation of cabinet drawers and doors. Skills in leadership, safety, mathematics, planning, and problem solving are reinforced in this course. Work-based strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite

Cabinetmaking II

Collision Repair Technology II

Course Number: 7522
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers basic collision repair practices, career information, and employment opportunities. Topics include welding, cutting, proper use of collision repair tools and equipment, and panel repairs using various substances. Skills in mathematics, science, reading, leadership, business and problem solving are reinforced. The work-based strategies appropriate for this course are job shadowing, internships, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite

Automotive Service Technology I

Collision Repair Technology III

Course Number: 7523
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course stresses practical application of advanced skills in collision repair. Specific instructions in panel repair, refinishing, painting, frame and unibody analysis, and estimation skills are stressed. The level III course helps prepare students for ASE certification. Skills in safety, mathematics, science, leadership, and business are reinforced. Work-based learning strategies appropriate for this course are internships, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite

Collision Repair Technology II

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Construction Technology I

Course Number: 7721
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides a basic introduction to construction work and the technical aspects of carpentry and cabinetmaking. Topics include safety, measurement, and the identification, selection, and use of tools, equipment, lumber, materials, and fasteners. Basic skills, leadership, career development, thinking and reasoning skills, mathematics, and principles of technology are reinforced. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite None

Construction Technology II

Course Number: 7722
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers advanced technical aspects of carpentry with emphasis on development of skills introduced in level I. Topics include plans, framing, footings, foundations, roofing, flashing, wall sheathing, insulation, vapor barriers, gypsum board, and underlayment. Skills in measurement, leadership, safety, mathematics, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisites Construction Technology I and Algebra I

Construction Technology III

Course Number: 7723
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers issues related to planning, management, finance, sales, labor, technology, community, health, environment, and safety. Topics include estimating, leveling instruments, forms, special framing, interior and exterior finishing, cabinets, built-ins, and metal studs. Skills in technical subjects, production, leadership, safety, problem solving, reading, and mathematics are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Construction Technology II

Cosmetology I

Course Number: 7811
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 600

This course introduces developmental skills, employment opportunities, and career information required for the cosmetology industry. Topics include facials, manicures, hair cutting, chemical relaxing and restructuring, wet hair styling, and hair coloring and lighting. Skills in mathematics, science, biology, leadership, and problem solving are reinforced in this course. The work-based learning strategy appropriate for this course is a school-based enterprise. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite None

Cosmetology II

Course Number: 7812
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 600

This course provides advanced development of process, techniques, and skills introduced in Cosmetology I. Topics include hair coloring techniques, chemical servicing; identification and treatment of disorders of the skin; scalp and hair; manicuring; pedicuring; artificial nails; hair removal; and permanent waving techniques. Students will receive 1200/1500 hours of training to prepare them for the Cosmetology Board Exam. Skills in chemistry, mathematics, business, thinking, and communication are reinforced in this course. The work-based learning strategy appropriate for this course is a school-based enterprise. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Cosmetology I

Drafting I

Course Number: 7921
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces students to the use of simple and complex graphic tools used to communicate and understand ideas and concepts found in the areas of architecture, manufacturing, engineering, science, and mathematics. Topics include problem-solving strategies, classical representation methods such as sketching, and geometric construction techniques as well as CAD (computer assisted design), orthographic projection, and oblique and isometric drawings. Skills in communication, mathematics, science, leadership, and problem-solving are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite None

Drafting - Architectural II

Course Number: 7962
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course is focused on the principles, concepts, and use of complex graphic tools used in the field of architecture, structural systems, and construction trades. Emphasis is placed on the use of CAD tools in the creation of floor plans, wall sections, and elevation drawings. Mathematics, science, and visual design concepts are reinforced. Work-based learning strategies appropriate for this course are apprenticeship and cooperative education. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Drafting I

Drafting - Architectural III

Course Number: 7963
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course introduces students to advanced architectural design concepts. Emphasis is placed on the use of CAD tools in the design and execution of site and foundation plans as well as topographical information and detail drawings of stairs and wall sections. Teaming and problem-solving skills are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeships, internship, and cooperative education. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite Drafting - Architectural II

Drafting - Engineering II

Course Number: 7972
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course focuses on engineering graphics related subjects introducing the student to symbol libraries, industry standards, and sectioning techniques. Topics include coordinate systems, principles of machine processes and gearing, and the construction of 3-D wireframe models using CAD. Mathematics, science, and mechanical engineering concepts involving the working principles and design of cams and gears are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internships, and cooperative education. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite Drafting I

Drafting - Engineering III

Course Number: 7973
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This course introduces the student to advanced engineering concepts. Using CAD tools, topics studied include descriptive geometry, geometric tolerancing, and advanced engineering design concepts such as surface and solid modeling. Science and mathematic concepts are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internships, and cooperative education. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is recommended prerequisite.

Prerequisite: Drafting - Engineering II

Electrical Trades I

Course Number: 7741
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces residential wiring, electrical installation, and service. Topics include basic electricity, electrical construction codes and practices, the National Electrical Code, the use of test equipment, and electrical hand and power tools. Skills in safety, mathematics, leadership, and problem solving are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: None

Electrical Trades II

Course Number: 7742
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course provides advanced instruction in residential wiring and introduction to electrical theory including AC and DC circuits. Emphasis is placed on test equipment, electrical color coding, conduit bending and installation, electrical measurements, use of polyphase current, specialty tools, transformers, and generators. Skills in safety, leadership, reading, mathematics, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite: Electrical Trades I

Electrical Trades III

Course Number: 7743
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers advanced and detailed instruction in the National Electrical Code and electrical principles and practices. Topics include test equipment, installation of wire in conduit, motors, transformers, generators, uses of different voltages, and control panels. Skills in leadership, safety, problem solving, and planning are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Electrical Trades II

Electronics I

Course Number: 7631
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers electronic practices and fundamentals, roles of electronics in communications and industry, and career development. Topics include safety, tools, direct current, schematics, soldering, measuring electricity, Ohm's/Watt's/Kirchoff's Laws, power, and circuits. Leadership skills, science, thinking skills, and principles of technology are reinforced. Job shadowing and internships are appropriate work-based learning strategies for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Algebra I

Electronics II

Course Number: 7632
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers advanced electronic practices and principles, special equipment and materials, and employment opportunities. Topics include safety, alternating current, inductive/capacitive/RCL circuits, semiconductor devices, rectifier/filter circuits, and bipolar transistors. Skills in leadership, safety, mathematics, reading, problem solving, tools, and test equipment are reinforced. Work-based learning strategies appropriate for this course are job shadowing, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite: Electronics I

Electronics III

Course Number: 7633
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course stresses hands-on experiences with trainers and real equipment to develop job competencies in electronics. Topics include safety, transistor circuits, logic devices, logic circuits, microprocessors, and applications of electronic systems. Skills in leadership, safety, science, thinking, and planning are reinforced. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Algebra II is a recommended prerequisite.

Prerequisite: Electronics II

Electro-Mechanical Technology I

Course Number: 7651
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers basic industrial machinery maintenance practices, overview of maintenance field, career information, and employment opportunities. Topics include safety, tools, equipment, measurement, blueprints, drive/support systems, electricity, welding (SMAW), plumbing, and fluid power. Basic skills, thinking skills, and principles of technology are reinforced. Job shadowing and internships are appropriate work-based learning strategies for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: None

Electro-Mechanical Technology II

Course Number: 7652
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers advanced industrial machinery maintenance practices including mechanical physics, electronics, and heating/ventilation/air conditioning. Topics include drive systems, welding (GMAW), oxyfuel gas cutting (OFC), plumbing, pipe fitting, fluid power, and heating/ventilation/air conditioning. Skills in leadership, safety, mathematics, reading, problem solving, electricity, welding (SMAW), and measuring are reinforced. Work-based learning strategies appropriate for this course are job shadowing, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite: Electro-Mechanical Technology I

Electro-Mechanical Technology III

Course Number: 7653
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course stresses hands-on experiences with trainers and real equipment to develop job competencies in industrial machinery maintenance. Topics include couplings, gear drives, bearings, packings, seals, motors/controls, logic controllers, pumps, hydraulics, pneumatics, and refrigeration. Leadership skills, safety, thinking, planning, welding, electricity/electronics, plumbing, heating/ventilation/air conditioning, and drive/support systems are reinforced. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Algebra II is a recommended prerequisite.

Prerequisite: Electro-Mechanical Technology II

Introduction to Trade and Industrial Education (ITIE)

Course Number: 7400
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces students to two to six career majors available in T&I Education. Students may rotate to different laboratories for instruction. Topics include level I objectives from each of the T&I course career majors being introduced. Skills in communication, science, mathematics, and leadership are reinforced in this course. Work-based learning strategies appropriate for this course are field trips and job shadowing. Hands-on work experiences and VICA leadership activities provide opportunities to enhance classroom instruction and career development.

Prerequisite: None

Masonry I

Course Number: 7711
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces the nature of masonry technology, materials and supplies, and employability skills. Topics include safety, layout, tools, leveling, plumbing, use of straight-edge, and jointing brick and block in wall construction. Reading, mathematics, problem solving, and principles of technology are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: None

Masonry II

Course Number: 7712
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course provides a continuation of masonry skills, estimating, blueprint reading, and building codes. Topics include constructing walls, corners, sills, and similar structures using a variety of bonds and materials. Skills in safety, leadership, reading, mathematics, problem solving, and career development are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences

Continued on next page

and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite: Masonry I

Masonry III

Course Number: 7713
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course provides advanced masonry skills, leadership development, and the preparation of technical presentations. Topics include constructing composite walls, steps, arches, lattice walls, sidewalks, brick and concrete pavers, window sills, chimneys, and fireplaces. Skills in safety, mathematics, reading, problem solving, and employability skills are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Masonry II

Metals Manufacturing Technology I

Course Number: 7641
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces various manufacturing processes and job opportunities in manufacturing with emphasis on machining metals parts. Topics include safety, math, measurement, blueprint reading, layout, bench work, sawing, drilling, turning, and grinding. Science, thinking skills, and principles of science are reinforced. Job shadowing and internships are appropriate work-based learning strategies for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Completed or enrolled in Algebra I

Metals Manufacturing Technology II

Course Number: 7642
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course provides advanced instruction in manufacturing and introduces computer assisted drafting/manufacturing and numerical control processes. Topics include safety, environmental protection, quality control, metallurgy, materials, layout, assembly, sawing, turning, milling, grinding, computer numerical control, computer-aided manufacturing, welding, and maintenance. Skills in leadership, safety, mathematics, reading, problem solving, blueprint reading, and precision measuring are reinforced. Work-based learning strategies appropriate for this course are job shadowing, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite: Metals Manufacturing Technology I

Metals Manufacturing Technology III

Course Number: 7643
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course includes specialized instruction in metals manufacturing and related processes as required by local industry. Topics include advanced turning and milling operations, computer-aided machining and computer numerical control. Skills in leadership, safety, basics, thinking, planning, and welding are reinforced. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Algebra II is a recommended prerequisite.

Prerequisite
Metals Manufacturing Technology II

Printing Graphics I

Course Number: 7911
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course introduces graphic communications and imaging technology with emphasis on printing production, publishing, and packaging industries. Topics include safety, layout, design, electronic imaging, reproduction photography, image assembly, platemaking, duplicator operations, and binding. Thinking skills, science, leadership, and visual art concepts are reinforced in this course. Job shadowing and internships are appropriate work-based learning strategies for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite
None

Printing Graphics II

Course Number: 7912
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course covers the entire printing graphic process, from design stage, to printing, bindery, and distribution stages. Topics include advanced safety, layout, design, electronic imaging, reproduction photography, image assembly, platemaking, and duplicator operations. Skills in leadership, reading, math, safety, science, and visual art concepts are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, cooperative education, and internship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry and Art I are recommended prerequisites.

Prerequisite
Printing Graphics I

Printing Graphics III

Course Number: 7913
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course engages students in advanced team and independent graphic communication studies related to areas of interest. Topics include multimedia concepts, screen printing, electronic imaging, offset printing, and flexography. Skills in leadership, safety, thinking, planning, science, and visual art concepts are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, cooperative education, and internships. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Algebra II and Art II are recommended prerequisites.

Prerequisite: Printing Graphics II

Scientific and Technical Visualization I

Course Number: 7901
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This state-of-the-art course introduces students to the use of complex graphic tools concurrently with the students' study in an academic area. Emphasis is placed on the use of complex graphic tools to better understand a given mathematics, and/or scientific concept. Visualization activities may include graphics of mathematical models, molecular structures, topographical maps, stratospheric and climate models, and statistical analysis. Computer, communication, math and science concepts are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: None

Scientific and Technical Visualization II

Course Number: 7902
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course provides students with advanced skills in the use of complex visualization tools for the study of math and/or sciences concepts. Students design and develop increasingly complex data and concept driven visualization models. Focusing on scientific and technical concepts, students learn how to communicate and analyze phenomena using statistical graphic and conceptual visualization computer applications. Communication, computer, technical, mathematics, and science skills are reinforced in this course. Work-based learning strategies appropriate for this course are apprenticeship, internships, and cooperative education. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Scientific and Technical Visualization I

Textile Technology I

Course Number: 7611
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers the manufacturing processes in the textile industry as well as the work ethics, opportunities, and occupations. Topics include plant operations, safety, fiber/yarn/fabric manufacturing and machinery, and dyeing/finishing methods and machinery. Mathematics, thinking skills, and principles of science are reinforced. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Completed or enrolled in Algebra I

Textile Technology II

Course Number: 7612
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course provides instruction in textile manufacturing with emphasis on group activities aimed at solving specific textile problems. Topics include safety, yarn manufacturing/equipment, fabric formation, dyeing, finishing, fiber science, electronics, mathematics, and industrial engineering. Skills in leadership, safety, reading, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course are job shadowing, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite: Textile Technology I

Textile Technology III

Course Number: 7613
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180 or 270-360 with work-based component

This course provides in-depth instruction on textile manufacturing combined with a cooperative education or apprenticeship component. Topics include plant organization and responsibilities, textile math, woven fabric design via computer, and a research paper. Skills in leadership, safety, thinking, planning, and mathematics are reinforced. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Algebra II is a recommended prerequisite.

Prerequisite: Textile Technology II

Trade and Industrial Advanced Studies

Course Number: 7999
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 135-180

This culminating, career-focused course for seniors in T&I programs includes a research paper, product, and presentation. Emphasis is on students demonstrating their abilities to use content and apply knowledge to real-world situations. Skills in leadership, writing, speaking, problem solving, mathematics, and science are reinforced in this course. It is important to connect work-based learning such as internship, apprenticeship, and cooperative education to this course. Students work under the guidance of a teacher-facilitator in collaboration with community members, business representatives, and other school-based personnel. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Three technical credits in Trade and Industrial Education.

Trade and Industrial Work Development I

Course Number: 7821
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180
Plus paid work experience

This course combines classroom instruction with skilled on-the-job training in the areas of communication, construction, manufacturing, transportation and related trade areas. In the school-based learning part of the course, emphasis is placed on team development, quality service and products, customer satisfaction, employment acquisition, career analysis, safety standards, and leadership. Students may enroll in the T&I Work Development course, the trade program, or both. Skills reinforced in this course are technical mathematics, measuring, reading, writing, and communication skills. Work-based learning strategies appropriate for this course include cooperative education and apprenticeships. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: None

Trade and Industrial Work Development II

Course Number: 7822
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135- 180
Plus paid work experience

This course provides skills necessary to become successful in a trade and industrial occupation. In the school-based learning part of the course, emphasis is placed on total quality teamwork, decision-making, running and controlling projects, communication skills, business ownership, and financial planning. Students in this program may enroll in the T&I Work Development course, the trade program, or both. Skills reinforced in this course are technical mathematics, reading, communication, and leadership. Work-based learning strategies appropriate for this course include cooperative education, apprenticeships, and internships. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite: Trade and Industrial Work Development I

Welding Technology I

Course Number: 7661
Recommended Maximum Enrollment: 20
Recommended Hours of Instruction: 135-180

This course covers basic industrial and construction welding practices, occupation characteristics, and employment opportunities. Topics include safety, tools, measurement, oxyfuel gas cutting processes, shielded metal arc welding (SMAW), and weld inspection. Science, thinking skills, mathematics, leadership skills, and principles of technology are reinforced in this course. Job shadowing is an appropriate work-based learning strategy for this course. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development.

Prerequisite None

Welding Technology II

Course Number: 7662
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course introduces advanced welding and cutting practices used in industry and construction and emphasizes hands-on experience. Topics include thermal cutting processes, gas metal (GMAW), flux cored (FCAW), and gas tungsten (GTAW) arc welding. Skills in leadership, safety, SMAW, mathematics, reading, and problem solving are reinforced in this course. Work-based learning strategies appropriate for this course are job shadowing, cooperative education, and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Geometry is a recommended prerequisite.

Prerequisite Welding Technology I

Welding Technology III

Course Number: 7663
Recommended Maximum Enrollment: 16
Recommended Hours of Instruction: 270-360

This course stresses practical application of advanced welding, cutting, inspection, testing, blueprint reading, and fabrication techniques. Topics include measuring and layout tools, blueprints, SMAW, GMAW, FCAW, GTAW, and weld inspection and testing. Skills in leadership, safety, science, thinking, and planning are reinforced in this course. Work-based learning strategies appropriate for this course are cooperative education and apprenticeship. Hands-on work experiences and VICA leadership activities provide many opportunities to enhance classroom instruction and career development. Algebra II is a recommended prerequisite.

Prerequisite Welding Technology II

LOCAL COURSE OPTIONS

Schools may offer one or more specialized courses not included in the Programs of Study. These courses should meet a local economic need. Options may include:

- Aerospace
- Air Conditioning/Refrigeration
- Appliance Repair
- Blueprint Reading
- Computer Engineering Technology
- Commercial Art
- Diesel Mechanics
- Law Enforcement
- Marine Occupations
- Photography
- Plumbing
- Programming & Broadcasting
- Upholstery

Refer to Part I, Local Course Options, and Appendix B for instructions on how to offer these courses.

FOR MORE INFORMATION

Trade and Industrial Education
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 North Wilmington Street
Raleigh, NC 27601-2825

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Part III
Special Populations Services

DESCRIPTION

The primary function of special populations coordination is to ensure that members of special populations receive adequate services and job skill training.

Special services are coordinated for special populations to ensure their access to, progress through, and success in the regular workforce development education programs. Students with the greatest needs have top priority for services. Coordinating with other service providers reduces the number of direct service contacts and the duplication of efforts. Being non-instructional personnel, Special Populations Coordinators have the major responsibilities for ensuring such coordination.

MAJOR FUNCTIONS

The major functions of the position include the following:

1. Outreach and Recruitment
2. Assessment/Prescription
3. Coordination with other Service Providers
4. Monitoring Access, Progress, and Success
5. Annual Accountability/Planning

Examples of appropriate activities for each of the major functions include the following.

Outreach

Outreach and Recruitment
- Recruitment, enrollment, and placement activities
- Provision of information about vocational opportunities
- Development of Career Development Plans

Assessment

Assessment/Prescription
- Identification of members of special populations
- Assessment of special needs
- Development and implementation of the Special Populations Component to the Career Development Plan
- Participation on the School-Based Committee for the development and implementation of the vocational and transitional components of the Individualized Education Program (IEP)
- Coordination of special services
- Maintenance of a workforce development education resource laboratory
- Assistance with fulfilling transitional services
- Provision of guidance, counseling, and career development activities

Coordination

Coordination with Other Service Providers

- Collaboration with vocational teachers and other relevant service providers
- Coordination of services with JTPA, Special Education, Vocational Rehabilitation, community agencies, business, and industry
- Facilitation of inservice training
- Coordination of work experiences and field trips
- Provision of guidance, counseling, and career development activities

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Monitoring

Monitoring Access, Progress, and Success

- Maintenance of records documenting access to, progress through, and successful completion of workforce development education programs
- Analysis of Vocational Education Information System (VEIS) data
- Documentation of the attainment of performance standards

Planning

Annual Accountability/Planning

- Identification of programs needing improvement
- Description of strategies to improve supplementary services
- Evaluation of incentives and adjustments
- Determination of case load and future personnel needs
- Development of a Plan of Work
- Provision of input about local improvements to the vocational/ workforce development director

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Major Service Area Outcomes

As a result of special services and activities, special populations enrollees should improved outcomes in three areas. These areas are access to, progress through, and success in comprehensive workforce development education. Comprehensive workforce development education is comprised of preparatory programs and services, instructional programs and services, and transition services.

1. Preparatory Programs and Services
    - Special populations enrollees have equal access to the recruitment and enrollment activities for all workforce development education programs.
    - Each special populations enrollee has a comprehensive, coherent Career Development Plan (CDP) incorporating his/her chosen vocational education program.

2. Instructional Programs and Services
    - Special populations enrollees have equal access to the full range of workforce development education opportunities.
    - Special populations enrollees make progress in basic and vocational skills through the use of supplementary services documented on the individualized education program (IEP) or the Special Populations Component to the CDP.

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- Special populations enrollees successfully progress through and complete their educational programs with incentives and adjustments.

3. Transition Services
   - Disabled students 16 and above have a transition component to the IEP.
   - With transition services, special populations enrollees are equitably able to enter post school employment, further education, and/or training.

DEFINITIONS

Disadvantaged

"Disadvantaged" includes all individuals (other than disabled individuals) who have economic or academic disadvantages and who require special services and assistance in order to enable them to succeed in workforce development education programs. This term includes individuals who are members of economically disadvantaged families, migrants, individuals who have limited English-proficiency, and individuals who are dropouts or who are identified as potential dropouts from secondary school. This definition does not include individuals with learning disabilities.

1. Academically disadvantaged
   An academically disadvantaged student is a student (other than disabled) who requires special services in order to succeed in Workforce Development Education programs and who meets one or more of the following standards as an indicator of a low achiever:

   - Scores at or below the 25th percentile on standardized achievement or aptitude tests

   - Has secondary grades below 2.0 on a 4.0 scale (where the grade "A" equals 4.0)

   - Fails to attain minimal academic competencies

2. Economically disadvantaged
   An economically disadvantaged student is a student (other than disabled) who requires special services in order to succeed in workforce development education programs and who meets one or more of the following standards as an indicator of low income:

   - Eligible for free or reduced school lunch

   - Eligible for Aid to Families with Dependent Children or other public assistance program

   - Foster Child

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- Eligible for food stamps
- Family income determined as low according to the U.S. Secretary of Education or the latest available data from the Department of Commerce.

C. Other Categories

Other categories of students who may require special services in order to succeed in workforce development education and who may be classified under the category of disadvantaged are defined below:

- *Limited English proficiency* - persons who have difficulty understanding the English language and/or English is not the common language of communication in their home environment.
- *Migrants* - agricultural workers or those in the fishing industry who have moved with their families from one school district to another during the past year to secure temporary or seasonal employment in agricultural-related food processing or fishing activities.
- *Dropouts* - persons who have left school for any reason before graduating or completing a program of study and without transferring to another school.
- *Potential dropouts* - persons who may reasonably be expected to leave school for any reason before graduating or completing a program of study and without transferring to another school. Students in this category usually exhibit one or more of the following characteristics:

a. Consistently low achievement
b. High rate of absenteeism
c. No motivation
d. Constant discipline problems
e. Delinquent behavior in school and in the community

Disabled

"Disabled," when applied to individuals evaluated under part B of the Individuals with Disabilities Education Act of 1990 in North Carolina, refers to individuals who are identified as autistic, behaviorally-emotionally handicapped, deaf-blind, hearing impaired, mentally handicapped, multihandicapped, orthopaedically impaired, other health impaired, specific learning disabled, speech-language impaired, traumatic brain injured, and visually impaired who, by reason thereof, require Special Education and related services, and who, because of their handicapping condition, cannot succeed in regular workforce development education programs without special assistance. These disabled individuals must be certified by standards established by the Division of Exceptional Children Services.

Definitions of Disabling Conditions

1. **Mentally Handicapped.** Mentally handicapped refers to those individuals with significantly sub-average general cognitive functioning and a reduced rate of learning. This condition exists concurrently with deficits in adaptive behavior, is manifested during the developmental period, and adversely affects the student's educational performance. (This includes Trainable and Educable Mentally Handicapped and severe profound.)

2. **Hearing Impaired.** Hearing impaired children are those with hearing losses that are handicapping educationally and developmentally and who, with or without amplification, may require various instructional modifications and related services in order to make full use of school experiences. Hearing impaired is a generic term which includes all hearing losses ranging from mild to profound.

3. **Multihandicapped.** Multihandicapped students have a combination of two or more handicaps (such as mentally handicapped/emotionally handicapped, mentally handicapped/blind, deaf/blind etc.), the combination of which causes such developmental and educational problems that the student cannot be properly accommodated in special programs that primarily serve one handicapping condition. Students who are severely multihandicapped have serious primary disabilities that are cognitive and/or behavioral and require significantly more resources than are provided for less handicapped children.

4. **Visually Impaired.**
    - Functionally blind children have so little remaining vision that they must use Braille as their reading medium.
    - Partially sighted children have a loss of vision, but are able to use regular or large type as their reading medium. These will generally be children who have a visual acuity between 10/70 and 20/200 in the better eye after correction.
    - Children who are legally blind have a visual acuity of 20/200 or less in the better eye after correction or a peripheral field so contracted that the widest diameter extends an arc no greater than 20 degrees.

5. **Other Health Impaired.** Other health impaired refers to chronic or acute health problems such as heart conditions, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, diabetes, genetic impairments, or some other illness that may cause a student to have limited strength, vitality, or alertness to such an extent that special educational services are necessary.

6. **Behaviorally/Emotionally Handicapped.** One who, after receiving specially designed educational support services and intervention strategies in the regular educational setting, still exhibits patterns of situationally inappropriate interpersonal or intrapersonal behavior of such frequency, duration, and intensity to disrupt the student's own learning process. Frequency, duration, and intensity are long-standing patterns of behavior that occur regularly and often enough to consistently interfere with the student's own learning process.

7. **Speech and Language Impaired.** A student with a speech and language impairment has a disorder in articulation, language, voice, and/or fluency. A speech and language impairment may range in severity from mild to severe. It may be developmental or acquired, and students may demonstrate one or any combination of the four parameters listed above. A speech and language impairment may result in a primary handicapped condition or it may be secondary to other handicapping conditions.

8. **Orthopaedically Impaired.** An orthopaedically impaired child possesses a severe orthopaedic impairment that adversely affects his/her educational performance. The term includes impairments caused by congenital abnormalities and impairments from other causes.

9. **Specific Learning Disabilities.** Specific learning disabilities is an inclusive term used to denote various processing disorders presumed to be intrinsic to an individual (e.g., acquisition, organization, retrieval, or expression of information; effective problem-solving behaviors). For the purpose of special educational services, a student classified as learning disabled is one who, after receiving instructional intervention in the regular education setting, has a substantial discrepancy between ability and achievement. The disability is manifested by substantial difficulties in the acquisition and use of skills in listening comprehension, oral expression, written expression, reading, and/or mathematics. A learning disability may occur concomitantly with, but is not the primary result of, other handicapping conditions and/or environmental, cultural, and/or economic influences.

10. **Autistic.** Autism refers to a severe and chronic developmental disorder that affects communication and behavior. The essential features include disturbances of:

    - developmental rates and/or sequence
    - responses to sensory stimuli

- speech, language and cognitive capacities
- capacities to relate to people, events, and objects

Associated features include stereotyped motor patterns and erratic expression of emotions. Most children classified as autistic function at a mentally handicapped level of intellectual development.

11. **Deaf-Blind.** Deaf-blind students have concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs.

"Disabled" under Section 504 of the Rehabilitation Act of 1973 means that an individual has a physical or mental impairment. The impairments include any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive, digestive, genito-urinary; hemic and lymphatic; skin; and endocrine; or any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

Suggested Workforce Development Education Service Delivery Model Grades 6-12

Local school administrative units shall make provisions to provide a wide range of support services as needed by members of special populations who are enrolled in a Workforce Development Education program. The chart on page 119 provides an example of a comprehensive service delivery system.

All services and activities must be provided as specified in the following publications:

1. *Challenge: A Handbook for Serving Members of Special Populations*
2. *Procedures Governing Programs and Services for Children with Special Needs*

Enrollment

To ensure that members of special populations receive adequate services and job skill training, local education agencies are encouraged to lower the maximum class size. One of the best practices of exemplary programs is to limit the number of disabled students to five per regular workforce development education class. Special programs for disadvantaged/handicapped students must adhere to the following student-teacher ratio:

1. Disadvantaged – up to 16 students per class period.

2. Educable Mentally Handicapped – up to 16 students per class period and no more than 40 students a day.

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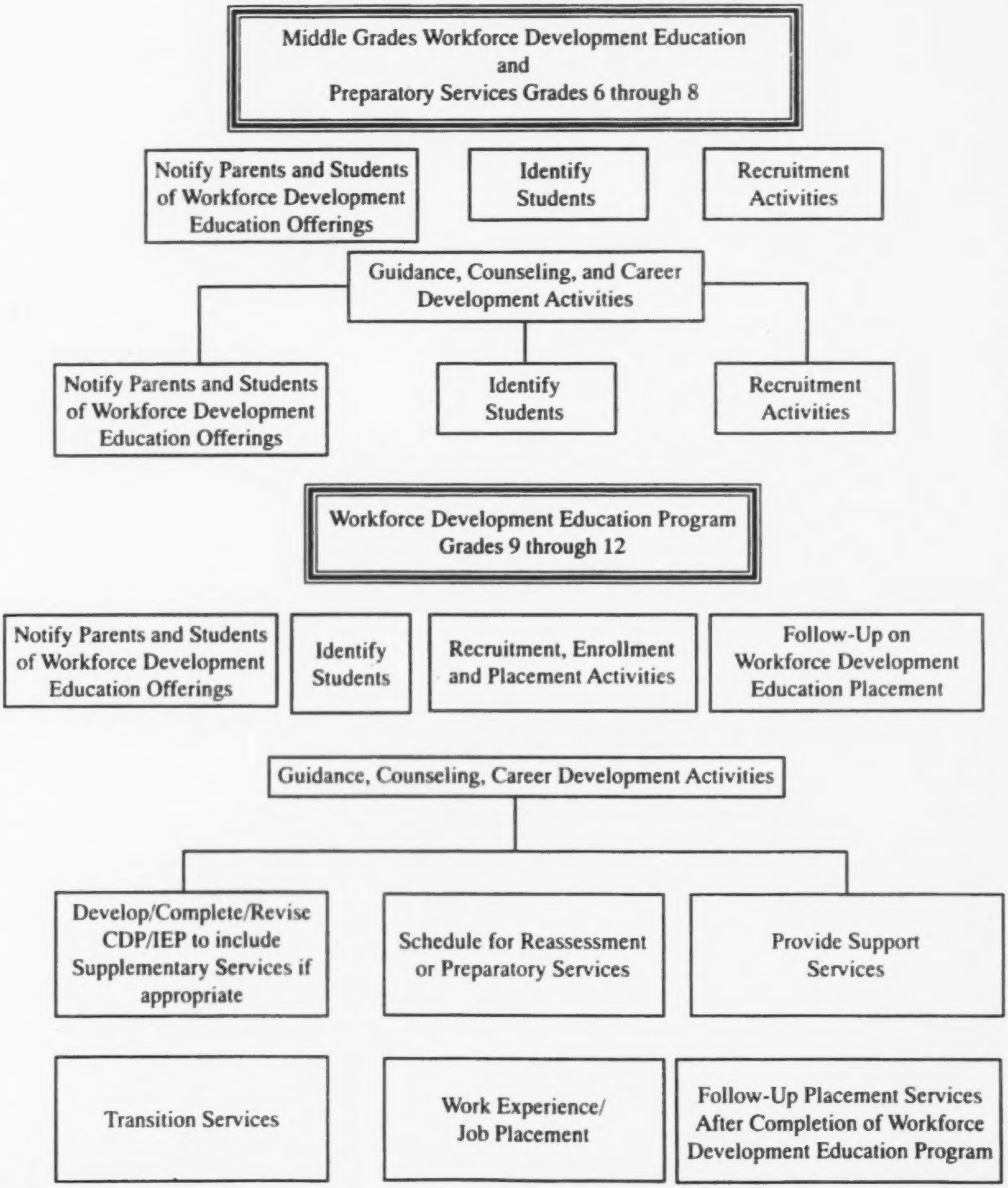
3. Learning Disabilities – up to 12 students per class period.
4. Trainable Mentally Handicapped – up to six (6) students per teacher per class period; 7-12 students require one teacher and one assistant; and 13-16 students require one teacher and two assistants per class.
5. Orthopaedically Handicapped – up to 12 students per class period with one teacher and one assistant.
6. Behaviorally Emotionally Handicapped – up to 8 students per special course with one teacher and one assistant.

FOR MORE INFORMATION

Special Needs
Workforce Development Education
Division of Instructional Services
North Carolina Department of Public Instruction
301 N. Wilmington Street
Raleigh, North Carolina 27601-2825

Special Populations
Suggested Workforce Development Education Service Delivery Model
Grades 6-12



Middle Grades Workforce Development Education and Preparatory Services Grades 6 through 8

- Notify Parents and Students of Workforce Development Education Offerings
- Identify Students
- Recruitment Activities

Guidance, Counseling, and Career Development Activities

- Notify Parents and Students of Workforce Development Education Offerings
- Identify Students
- Recruitment Activities

Workforce Development Education Program Grades 9 through 12

- Notify Parents and Students of Workforce Development Education Offerings
- Identify Students
- Recruitment, Enrollment and Placement Activities
- Follow-Up on Workforce Development Education Placement

Guidance, Counseling, Career Development Activities

- Develop/Complete/Revise CDP/IEP to include Supplementary Services if appropriate
- Schedule for Reassessment or Preparatory Services
- Provide Support Services
- Transition Services
- Work Experience/ Job Placement
- Follow-Up Placement Services After Completion of Workforce Development Education Program

Vocational Student Organizations

DIVISION OF INSTRUCTIONAL SERVICES
WORKFORCE DEVELOPMENT
NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION

REVISED, 1987, 1992, 1996, 1997

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Administration of Vocational Student Organizations (VSOs)

Intent and Purposes of Vocational Student Organizations

Vocational student organizations are for individuals enrolled in workforce development programs. They are designed to be organized and conducted as an integral part of instruction.

They contribute significantly to the motivation, education, and total development of students through activities which develop leadership abilities, citizenship skills, social competencies, and a wholesome attitude about living and working.

They are a teaching tool, which when properly used and guided by the teacher, will enhance, enrich, complement, and supplement the instructional program.

Some of the purposes, goals, and aims common to all of these student organizations are to
- Strengthen leadership abilities
- Strengthen thinking skills
- Enable members to work democratically in groups
- Strengthen creativity
- Strengthen self-confidence
- Improve study and instruction
- Strengthen knowledge, skills, and attitudes that lead to successful employment and further education

Organization, Structure, and Operations

Each organization seeks to attain these objectives within the framework and subject matter of each workforce development program.

The organizational structure and operation of vocational student organizations vary slightly; however, they have many common goals, objectives, and activities. There are variations in local, state, and national membership dues charged by each organization.

In order for a student to be a member in good standing and to be eligible to participate in the total program of activities at all levels, individual membership dues are required. All students can participate in VSO activities in the classroom and laboratory.

Some other requirements for the effective operation of vocational student organizations include the following:
- Teachers should be actively involved in a student organization by integrating the activities into the curriculum.
- Teachers should be permitted to use class time for VSO activities needed to reach vocational education program objectives.
- Instruction time should be used for VSO activities which:

    - Involve all students.
    - Are used to motivate students.
    - Enrich and/or enhance instruction.
    - Are designed to enhance employment and educational opportunities.
- Teachers should have funds for substitutes, travel, and subsistence while taking part in vocational student organization activities on the local, regional, state, and national levels.
- All state policies regarding VSO financial affairs and fiscal practices also apply at the district and local levels.

Relationship to Curriculum and Competencies

VSO activities are based on the competencies needed by all students leading to employment be further education.

They are used as a method of instruction for the development of essential competencies for all students enrolled.

VSO activities provide learning experiences which improve knowledge, increase skills, and enhance acceptable attitudes that advance all vocational students toward their chosen career and citizenship responsibilities. They provide opportunities for leadership development and a broader understanding of one's responsibilities to society. VSO activities should be bona fide learning activities that perpetuate a student's progress toward their chosen career field.

Benefits to Students

Leadership Development
- Opportunity to become a leader through selfdiscovery of talents and their application.
- Development of the ability to communicate with individuals, small groups, and large groups.
- Preparation for professional and occupational leadership.
- Opportunity to develop the skills of followership.
- Opportunity to develop negotiation skills.

Career Development
- Enhancement of career awareness, exploration, and preparation.
- Preparation for occupational excellence and pride through competitive activities.
- Vocational guidance through involvement with adult leaders in the world of work.

Citizenship Development
- Awareness of civic responsibilities.
- Involvement in service opportunities.
- Participation in group processes.
- Involvement in group decision making.
- Development of self management.

Personal Development
- Opportunities for associating with adult role models.
- Opportunities to express and develop a self-concept through fellowship and good recreation.
- Development of strength of character through standards, creeds, and codes of ethics.

- Recognition through awards and competition.
- Preparation for adult living.

NOTE: There are numerous tangible benefits, (scholarships, awards, prizes, etc.) available to members in addition to the previous educational benefits.

Implementation

The basic prerequisites for establishing a local VSO chapter are the following:

- The existence in the local school of a workforce development program area; and
- Interest and support from school administrators, teacher(s), and students.

Upon meeting these requirements, the local group should contact the appropriate VSO office for materials, information and a charter application.

The following steps should then be taken by the local group:

- Develop a local VSO constitution which is not in conflict with that VSO's state and/or national constitution.
- Elect officers and establish appropriate committees.
- Prepare a program of activities.
- Submit application for charter, a copy of the above items, plus membership roster and dues to the appropriate VSO office.

Local Administrative Responsibilities

- Provide resources for organizing, implementing, and maintaining the VSO in each program area.
- Make provisions for appropriate teacher staff development related to VSO.
- Provide leadership and guidance to teachers for the integration of VSO activities into the curriculum.
- Encourage, promote, and help provide opportunities for student membership and participation in activities on the local, district state, and national levels.

State Staff Services

Some of the services that are provided by state staff personnel include:

- Promoting and giving leadership to the development of VSO activities as an integral part of the instructional program and the curriculum.
- Providing leadership and assistance through teacher inservice training, resource materials, and other technical assistance.
- Facilitating leadership programs, competitive activities, conferences, conventions, and other activities in cooperation with local vocational education personnel.
- Coordinating VSO activities from the local level to national level.

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Overview of Vocational Student Organizations

Vocational Student Organizations supported through the Division of Instructional Services, Workforce Development Services, are

- Career Exploration Clubs of North Carolina (CECNC)
- DECA for Marketing Education
- FFA for Agricultural Education
- Future Business Leaders of America (FBLA)
- Future Homemakers of America/Home Economics Related Occupations (FHA/HERO)
- Health Occupations Students of America (HOSA)
- Technology Students of America (TSA)
- Vocational Industrial Clubs of America (VICA)

Career Exploration Clubs of North Carolina (CECNC)

Introduction

Career Exploration Clubs of North Carolina (CECNC) is a local and state vocational student organization for middle grades students enrolled in exploratory workforce development courses.

The purposes of CECNC are to
- Encourage improvement in scholarship.
- Develop competent leadership.
- Strengthen the confidence of students in themselves and their work.
- Create more interest for exploring tentative occupational choices.
- Develop character, train for useful citizenship, and foster patriotism.
- Encourage and practice thrift.
- Provide and encourage the development of organized recreational activities.
- Serve as motivation for enhancing instruction.
- Familiarize and encourage participation in VSOs at the high school level.

Levels of Organization and Dues

Local – Dues determined by local chapter
Regional – No dues required
State – Annual dues required

Opportunities for Involvement

CECNC members have an opportunity to participate in the following individual, team, and chapter-wide competitive events:

- Career Development Plan
- Career Display
- Career Research
- Career Skit
- Career Video
- Chapter of Excellence
- Creed
- Decision Making
- Helping Hands
- Illustrated Presentation
- Officer Elections
- Parliamentary Procedure
- Performing Arts
- Problem Solving/Creative Thinking
- Public Speaking
- Technical Report Writing

DECA: An Association of Marketing Students

Introduction

DECA is a state and national organization available to all students who are currently enrolled in Marketing Education courses.

Levels of Organization and Dues

Local – Determined by local chapter
State – Annual dues required
National – Annual dues required

Opportunities for Involvement

Competitive events are available for student participation at the district, state, and national levels.

Competency-Based Individual Written Events
Fashion Merchandise Promotion Plan
Business, Personal & Financial Services Marketing
Food Marketing
General Marketing
Hospitality & Recreation Marketing
Entrepreneurship
Specialty Store Retailing
Merit Awards Program
Free Enterprise

Chapter Projects
Creative Marketing
Free Enterprise
Naylor H. Fitzhugh Learn & Earn
Civic Consciousness
Public Relations

Competency-Based Participating Competitive Events
Apparel & Accessories Master Employee
Apparel & Accessories Supervisory
Food Marketing Master Employee
Food Marketing Supervisory
Retail Merchandising - Master Employee
Retail Merchandising - Supervisory
Quick Serve Restaurant Management
Full Service Restaurant Management
Advertising & Visual Merchandising
Finance & Credit Marketing
Vehicles and Petroleum Marketing
Hospitality and Tourism Marketing

Scholarship Awards Program
- T. Carl Brown Scholarships
- N. C. Merchants Association
- American Business & Fashion Institute
- Asheville Merchants Association
- Winston-Salem Merchants Association
- Hickory Merchants Assoc.
- King's College

National programs, projects and benefits to members
- Activities to Promote Mathematic Skills
- Activities to Promote Free Enterprise & Economic Awareness
- Activities to Build Self-Esteem
- Chapter Achievement Programs
- Chapter Activities
- Community Projects
- Marketing Education Program Enrichment
- Leadership Conferences: District, State, Regional, and National
- Leadership Positions
- Learn and Earn Activities
- Magazines: State and National Levels
- Merit Awards Activities
- National, Regional, State Business Associations Support
- Officers and Committee Members: Local, District, State, and National
- Professional Conferences: Local, District, State, Regional and National
- Scholarship Programs
- School Improvement Projects
- Business Sponsored Activities

FFA: The Organization for Agricultural Education Students

Who We Are	FFA is a state and national organization that serves students enrolled in agricultural education courses.
Purpose	FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricutural education.
Levels of Organization and Dues	Local - Determined by local chapter Federation - Determined by Federation Region - Determined by Region State - Annual dues required National - Annual dues required
Incentives to Excel	An extensive awards/recognition program is provided for individual members, teams and chapters. These include over 40 proficiency awards, the Agriscience student program and a four-level degree program for individual members; a chapter-wide award programs recognizing community chapter and member development, and more than 15 team career development events. Awards totaling more than $50,000 are awarded each year to individual members and groups for outstanding achievements. These awards are provided through FFA dues, the National FFA Foundation, and the state FFA Foundation.
Benefits to Members	FFA members each year receive a membership card, six issues of the FFA New Horizons magazine; the opportunity to participate in the FFA Camping Program at a minimal cost; the opportunity to participate in numerous leadership development activities/conferences, and the opportunity to participate in the State and National conventions. Over $1,000,000 in college scholarships is awarded annually to deserving FFA members. FFA also offers members the opportunity to participate in international travel experiences, mentoring programs and many other personal development and recreational activities at the local level.

Future Business Leaders of America (FBLA)

Introduction

FBLA is an organization (with state and national affiliations) for middle and high school students enrolled in business education courses. FBLA's mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs. Co-curricular activities include career exploration, civic service, economic education, and fostering entrepreneurship.

Levels of Organization and Dues

Local - Dues determined by chapter
Regional - No dues required
State - Annual dues required
National - Annual dues required

Opportunities for Involvement

Active FBLA members are provided opportunities to participate in competitive events designed to recognize students who excel in applying school- based learnings to simulated work-based activities.

Competitive Events for Middle Grades Students *(Grades 6-8)**

Business Communication (MG)
Business Math (MG)
FBLA Creed (MG)
FBLA Principles and Procedures (MG)
Impromptu Speaking (MG)
Parliamentary Procedure (MG)
Public Speaking (MG)

Competitive Events for High School Students *(Grades 9-12)*

Individual

Accounting I
Accounting II
Business Calculations
Business Communication (HS)
Business Law
Business Math (HS)
Business Procedures
Computer Applications
Computer Concepts
Economics
FBLA Creed (HS)
Impromptu Speaking (HS)
Information Processing Concepts
Introduction to Business
Job Description Manual
Job Interview
Keyboarding Applications
Machine Transcription
Mr. FBL
Ms. FBL
Public Speaking (HS)
Who's Who
Word Processing

Team

Desktop Publishing
Entrepreneurship
Parliamentary Procedure

Chapter

American Enterprise Project
Community Service Project
Crime Prevention Project
Partnership with Business Project
Local Chapter Annual Business Report
Gold Seal Chapter Award of Merit
Largest Local Chapter
Local Recruitment of Chapters
Helen Ragan Chapter of the Year

Scholarships

James L. White Scholarship Award
King's College/Sonja Litton Scholarship
NCVA-BE Broyhill Leadership Scholarship
Operation Enterprises Scholarship
UNC-G School of Business Scholarship

Recognition

NCBEA Outstanding Student Service Award
Businessperson of the Year
Adviser of the Year
Honorary Life Member

* All middle grade competitive events are individual.

FBLA is dedicated to bridging the gap between school and the workplace. Consequently, every program, service and activity is designed to build character, encourage scholarship, and promote competent, aggressive business leadership. Among other benefits, FBLA members receive two publications – *Tomorrow's Business Leader* and *The NC Business Leader* a magazine and newsletter written for business education students. Additionally, members have the opportunity to attend regional, state and national conferences which provide leadership development, problem solving and knowledge integration workshops and activities.

Future Homemaker of America/ Home Economics Related Occupations (FHA/HERO)

Introduction

FHA/HERO is a national organization for middle and high school Family and Consumer Sciences students. It is a co-curricular organization that is a vehicle for mastering Family and Consumer Sciences competencies through leadership, citizenship, and skill development activities. Members develop skills for life through character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation.

Membership and Types of Chapters

- FHA Chapters - Any student who is taking or has taken a foundation and pre-career specialization courses is eligible for membership in an affiliated chapter. The emphasis in FHA chapters is on exploration and examination of Family and Consumer Sciences careers.
- HERO Chapters - Any student who is taking or has taken a career specialization course is eligible for membership in an affiliated chapter. The emphasis in HERO chapters is on development of technical and employability skills for Family and Consumer Sciences careers.
- FHA/HERO Chapters - This is a combination of FHA and HERO chapters.

Levels of Organization and Dues

Local - Determined by local chapter
Regional - No Dues
State - Annual dues required
National - Annual dues required

Opportunities for Involvement

FHA/HERO offers many quality programs and activities that encourage students to set career goals, develop self-confidence, and learn about the problems and opportunities inherent in balancing the family and a career. Through involvement in school and community activities members develop a sense of belonging, build self-esteem, gain recognition, and become more autonomous. Chapter projects focus on a variety of youth concerns, including nutrition and fitness, environment, intergenerational communication, parenting, family relationships, and career development. Examples of competive events, programs, projects and recognition activities related to the Family and Consumer Sciences Education Curriculum with emphasis on specific competencies are listed below.

Benefits to Members

- COMPETITIVE EVENTS:
  Applied Technology
  Chapter Service Project
  Chapter Showcase
  Creative Fashion
  Creative Home Interiors
  Entrepreneurship
  Focus on Children
  Food Science
  Food Service
  Illustrated Talk
  Interpersonal Communications
  Job Interview
  Nutri-Snacks
  Parliamentary Procedure
  Skills for Life
- NATIONAL PROGRAMS AND PROJECTS:
  Champions Challenge
  Community Service Award
  Families Acting for Community Traffic Safety
  Financial Fitness
  Japanese Exchange Program
  Leaders at Work in Food Service
  Power of One
  Project Earth 2000
  Step One
  Student Body
- RECOGNITION AND SERVICE:
  Adviser Mentor
  Honorary Member
  Master Adviser
  Member of Year
  Teacher Scholarship

Health Occupations Students of America (HOSA)

Introduction

HOSA is a state and national organization whose mission is to enhance the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health occupations education students, therefore, helping the students to meet the needs of the health care industry.

Membership

High school males and females in grades 9 through 12 with an interest in health careers.

Opportunities for Involvement

Competitive Events

Category I
– Health Occupations Related Events
Dental Spelling
Dental Terminology
Extemporaneous Health Display
Medical Spelling
Medical Terminology

Category II
– Health Occupations Skill Events
Dental Assisting
Medical Assisting - clerical
Medical Assisting - clinical
Nursing Assisting
Practical Nursing
Surgical Technology (PS Only)
Advanced Nursing (PS Only)
Dental Laboratory Technology
Respiratory Care (PS Only)
Sports Medicine
Veterinary Assisting
Opticianry
CPR/First Aid
Physical Therapy Aid

Category III
– Individual Leadership Events
Extemporaneous Speaking
Job Seeking Skills
Prepared Speaking
Extemporaneous Writing
Researched Persuasive Speaking

Category IV
– Team Leadership Events
Community Awareness Project
HOSA Bowl
Parliamentary Procedure
Outstanding HOSA Chapter
Creative Problem Solving
Biomedical Debate
Outstanding HOSA Member

- Scholarships – $6000 annually
- National Leadership Academy
- National Recognition Program
- National Service Project "Make-a-Wish Foundation"
- Barbara James Service Award
- Gold Star Chapter Program

Technology Student Association (TSA)

Introduction

TSA is an organization (with state and national affiliations) for elementary, middle, and high school students enrolled (or who have completed) technology education courses. TSA's mission is to prepare its membership for the challenges of a dynamic world by promoting technological literacy, leadership, and problem solving, resulting in personal growth and opportunities. In additions to these goals, NC-TSA's mission statement reads "To empower students to become leaders and citizens of the highest quality by creating and sustaining technology programs of excellence in order to serve our communities and nation".

Levels of Organization and Dues

Local - Dues determined by chapter
District - None
State - Annual dues required
Regional - None
National - Annual dues required

Opportunities for Involvement

Competitive events are available for student participation at the regional, state, and national level. Winners may advance from local, to regional, state, and national competition by competing in the following contest categories:

Level I (Middle School & Junior High School)

- Aerospace Technology
- Architectural Model
- Computer-Aided Design/Drafting (CADD)
- Computer Construction & Application (CADD)
- Computer Integrated Manufacturing
- Chapter Team
- Construction Technology
- Control Technology
- Electricity/Electronics
- Engineering Graphic Analysis
- Extemporaneous Speech
- Graphic Design
- Manufacturing Prototype
- Prepared Speech (Revised)
- Promotional Communications
- Research and Design
- Structural Engineering
- Technical Research & Report Writing
- Technology Bowl Oral and Written
- Technology Challenge
- Technology Process Display
- Technology Problem Solving
- Technological Systems
- TSA/National Engineering Design Challenge

Level II (High School)

- Aerospace Technology
- Architectural Model
- Chapter Team
- Computer-Aided Design/Drafting
- Computer Construction & Application
- Construction Technology
- Control Technology
- Desktop Publishing (Pilot)
- Electronic Systems
- Engineering Graphic Analysis
- Extemporaneous
- Imaging Technology
- Manufacturing Prototype
- Prepared Presentation
- Promotional Communications
- Promotional Graphics
- Radio Control Transportation Challenge
- Research and Design
- Structural Engineering
- Technical Research and Report Writing
- Technological Systems
- Technology Bowl
- Technology Challenge
- Technology Problem Solving
- Technology Process Display
- TSA/National Engineering Design Challenge

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Awards & Recognition Programs

Achievement Program
TSA Technology Honor Society
TSA Chapter Excellence
Advisor of the Year
TSA Recognition Awards
William P. Elrod Memorial Scholarships
TSA Scholarships

TSA is dedicated to helping students develop board technological literacy in order that they may become responsible, participating, healthy and successful citizens. As part of our state's technology education program, TSA, helps students acquire and apply design, problem-solving, teaming and leadership skills. Students also learn to use simple and complex tools found in communication, manufacturing, structural, and transportation systems. Students are also given the opportunity to develop authentic skills which are reflective of today's workplace and to demonstrate and be recognized for excellence by others. In addition to competitive conferences, students have the opportunity to attend regional, and state workshops which provide leadership, teaming, and problem-solving development.

Vocational Industrial Clubs of America (VICA)

Introduction

VICA is a state and national organization that serves trade, industrial, and technical students in secondary and post secondary public schools.

Levels of Organization and Dues

Local - Determined by local chapter
Regional - No annual dues
State - Annual dues required for student and professional members
National - Annual dues required for student and professional members

Opportunities for Involvement

Competitive events are available for student participation at the state level of the organization. Winners advance from local competition to regional, state, and national competition by competing in the following contest categories:

Leadership Development Contests

Chapter Business Procedure (Team Event)
Creed "A"
Creed "B"
Current Events
Domestic Affairs
Debate (team event)
Extemporaneous writing
ICT Employee Competency
International Affairs
Job Interview
Opening & Closing Ceremonies (team event)
Prepared Speech
Spelling
Technical Math
VICA Pledge "A"
VICA Pledge "B"

General Contest

Poster Board
Promotional Bulletin Board (team event)
Display (team event)
Outstanding Club (Single & Multiple)
Occup. Health & Safety (Single & Multiple)
VICA Quiz Bowl (team event)
VICA Video
North Carolina State VICA Award
Adam J. Thompson Memorial Award
Willis A. Parker Memorial Award
Outstanding VICA Member Award
Chapter Quality Standards Award
American Spirit Award
American VICA Degree Award
North Carolina State VICA Leader Award
Advisor of the Year Award

Skill Development Contests

Action Skills
Advertising & Design
Air Conditioning & Refrigeration
Air Cooled Gasoline Engine Repair
Architectural Drafting
Auto Body Repair
Automated Manufacturing
Automotive Service Technology
Aviation Maintenance Technology
Cabinetmaking
Carpentry
Commercial Photography
Cosmetology
Diesel Equipment Technology
Electronic Technology
Graphic Communications
Fantasy Nail Art
Industrial Maintenance
Job Skill Demonstration "A"
Job Skill Demonstration "B"
Law Enforcement
Machine Drafting
Marine Mechanics
Motorcycle Service Technology
Precision Machining Technology
Principles of Technology
Residential Plumbing
Residential Wiring
Technical Drafting
Television Production
Welding

Members are part of a national group of skilled youth on the move – working toward future career goals. VICA members make things happen in their schools and communities and in the nation with their leadership and work skills. Members complete at various levels to demonstrate their competencies in skill, leadership, and general contests. Members meet industry, business, and civic leaders and learn to develop leadership and citizenship skills through public speaking events at the community, state, and national levels.

APPENDIX B
8/96
WD-PS-1

Approval Process for Offerings Workforce Development Education Courses Not in the *Programs of Study*

Rationale for approval process:
In order to promote innovation and ensure that the purposes of workforce development education are being supported, the following approval process has been developed for local school systems to use when they want to offer a course not included in this document. Planning should take place prior to the year a school system wants to offer the course. (School systems are not required to submit a modification request if a third level course is added to any sequence shown in this document.)

Approval process:
Prior to offering a course not in the *Programs of Study*, a local school system must follow these steps and send documentation to the Workforce Development Education Sections, Division of Instructional Services, for approval. (Local school systems are encouraged to consult with program area staff before starting the approval process.)

A. Occupational skill sequence

1. Justify offering the course either by State Plan employment demand or local survey. The survey must include the names of companies contacted and their employment projection for workers in that field for the next three years.
2. Verify that there is student interest to support the course.
3. Develop an equipment and supplies list that has been verified by business/industry. Verify that funds will be available to purchase the needed supplies and equipment.
4. Verify that a certified instructor and adequate facility will be available when the course is to be offered.
5. For the course(s) to be offered, develop competency and objectives listings (blueprint) that have been verified by business/industry. A content outline and a pre- and post-assessment must be prepared also.
6. Submit documentation for Items 1-5 to the Section Chief 120 days before students are enrolled. The section chief will recommend approval or disapproval to the Head of Workforce Development Education who will give final approval. If approved, the annual application will reflect the course offering. Form WD-PS-1 must be attached to the plan.

B. Practical life, consumer, or support course

1. By comparing competencies, determine if a similar course is being offered in another curriculum area or with another course title. Assure that course relates to the purposes of workforce development education as specified in GS. 115-C-15.
2. Verify that there is student interest to support this course.
3. Develop equipment and supplies lists. Verify that funds will be available to purchase the needed equipment and supplies.
4. Verify that a certified instructor and facility will be available when the course is to be offered.
5. Develop a competency, and objective listing (blueprint) a pre- and post-assessment, and outline for the course(s).
6. Submit documentation for Items 1-5 to the Section Chief 120 days before students are enrolled. The section chief will recommend approval or disapproval to the Head of Workforce Development Education who will give final approval. If apporved, the annual application will reflect the course offering. Form WD-PS-1 must be attached to the plan.

8/96
WD-PS-1

Request to Offer Modification Workforce Development Education Courses Not in the Programs of Study

1.____________________ Date Form Submitted 2. _______________ Implementation Date

3. LEA ____

4. Program Area ____________________ 5. Course ____________________

6. School(s) where course(s) will be offered ____________________________

7. Documentation on file in local school system:

Occupational Skill Sequence			**Practical life, consumer, or support course**		
Yes	No	Documentation	Yes	No	Documentation
___	___	Employment Demand	___	___	Comparison with other courses
___	___	Student Interest	___	___	Student Interest
___	___	Equipment List	___	___	Equipment List
___	___	Supply List	___	___	Supply List
___	___	Certified Instructor	___	___	Certified Instructor
___	___	Adequate Facility	___	___	Adequate Facility

Documentation submitted to State Office:

Yes	No	Documentation
___	___	Blueprint (Competency and Objectives listings)
___	___	Content Outline
___	___	Pre- and post-assessment

____
Workforce Development Administrator Signature

State Office Approval

1. Approval is recommended Yes ___ No ___ Course # assignment ____________

If no, why?

2. Section Chief's Signature ____________________________

3. Head, Workforce Development Education Signature ____________________

Note: When the annual application is submitted to Workforce Development Education, a signed copy of this form must be attached.

APPENDIX C

NORTH CAROLINA MINIMUM STATE GRADUATION AND POSTSECONDARY EDUCATION REQUIREMENTS*

Content Area	**North Carolina High School Graduation Requirements**	**College Tech Prep Requirements****	**College Prep (University of NC System 4-Year College Requirements **)**
English	4 Courses I, II, III, IV	4 Courses I, II, III, IV	4 Courses I, II, III, IV
Mathematics	3 Courses 3 Courses including Algebra I	3 Courses Algebra I, Geometry, Algebra II or Algebra I, Technical Math I & II	3 Courses Algebra I, Geometry, Algebra II *(recommended one course unit in 12 the grade)*
Science	3 Courses a physical science course Biology other science course	3 Courses a physical science course (related to career pathway (CP)) Biology other science course related to CP	3 Courses a physical science course a life or biological course *(Biology)* at least one laboratory course
Social Studies	3 Courses Government/Economics (ELPS) US History World Studies	3 Courses *Government/Economics (ELPS)* *US History* *World Studies*	*2 Courses (3 for NC Diploma)* US History One elective *(ELPS or World Studies)*
Foreign Language	Not required	Not required	2 Courses Recommended at least two (2) course units in one foreign language with one course unit taken in 12th grade
Computer Skills	A specific course is not required but students must demonstrate proficiency through state testing (starting with the graduation class of 2001)	A specific course is not required but students must demonstrate proficiency in keyboarding and computers	*A specific course is not required but students must demonstrate proficiency through state testing (starting with the graduation class of 2001)*
Health and Physical Ed.	1 Course Health/Physical Education	*1 Course* *Health/Physical Education*	*1 Course* *Health/Physical Education*
Career/Technical	Not required	4 Units of Credits Select courses appropriate for career pathway or major	Not required
Arts Ed. (Visual Arts, Dance, Music & Theater Arts)	Not required (local decision*)	Not required (local decision*)	Not required (local decision*)
Electives	6 Elective Courses Additional electives must be included to meet local graduation requirements	*Elective Courses* *Additional electives must be included to meet local graduation requirements*	*Elective Courses* *Additional electives must be included to meet local graduation requirements*
Total	20 courses + Local Requirements	Depends on Local Requirements	Depends on Local Requirements

* LEAs may require additional courses for graduation.

** A high school diploma or its equivalent is required as well.

Note: Italics indicate items necessary to meet NC graduation requirements but not specific requirements to the course of study.

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Evaluation Form
Programs of Study and Support Services Guide
Workforce Development Education

This document has been prepared to assist local school systems in planning effective and comprehensive workforce development education programs. Please let us know how helpful it is to you by filling out this evaluation form. Note that the more specific and clear your suggestions are, the more useful and influential they will be in future planning.

Reviewer's Name: ______________________ Position: ______________________

School or Business Name: ______________________ City: ______________________

Part(s) Evaluated: _____ Part I: Workforce Development Education in North Carolina
Planning, Resources, Work-based Learning, Course Offerings
_____ Part II: Program Area Planning
List program area(s): ______________
_____ Part III: Support Services - Special Populations
Description, Functions, Definitions, Service Delivery Model

This Document:	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1) Is well structured and focuses on essential concepts and information.	5	4	3	2	1
2) Reflects the need for local school systems to have flexibility to accommodate varying local patterns of organization, resources, and needs.	5	4	3	2	1
3) Has components that are useful to program planners (principals, counselors, teachers, and program administrators) for explaining or clarifying program.	5	4	3	2	1
4) Has components that can be used with advisory groups or business and industry leaders for explaining or clarifying programs.	5	4	3	2	1
5) Has components that can be used with parents for explaining or clarifying program.	5	4	3	2	1
6) Promotes career exploration development	5	4	3	2	1
7) Promotes work-based learning.	5	4	3	2	1
8) Supports the connection between workforce development and academic studies.	5	4	3	2	1
9) Is easy to use.	5	4	3	2	1

Return to:
Workforce Development Education
NC Department of Public Instruction
NC Education Building, Room 6029
301 North Wilmington Street
Raleigh, NC 27601-2825

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